

Chilton's

MOTOR AGE

NOVEMBER 1950



This Issue:

Four 1951 Cars Announced



IT'S THE RIGHT RING FOR
ALL REPLACEMENT JOBS

★ RE-BORE
★ RE-RING
★ RE-SLEEVE

The famous Hastings Steel-Vent is engineered for replacement service—and for *all* replacement service. It's the ring for every re-bore, re-ring and re-sleeve job.

Hundreds of fleet maintenance men specify Steel-Vent for every job. Thousands of garages and repair shops install Hastings Steel-Vent sets exclusively. Millions of car, truck and tractor owners know Steel-Vent is tough on oil-pumping, gentle on cylinder walls.

It will pay you to install Hastings Piston Rings in every job. They stop oil-pumping, check cylinder wear, restore performance under every replacement condition.

HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN
Hastings Ltd., Toronto

TOUGH BUT OH SO GENTLE

**FOR CAST IRON RING SETS,
ASK FOR HASTINGS DUBL-CHECK**

Where price is a factor, or special sales conditions exist, Hastings DUBL-Check Sets are the answer. Made of high-graphitic iron, these rings seat quickly, give long and trouble-free service. You can't buy a better cast iron set.



HASTINGS
Steel-Vent Piston Rings

TOUGH on oil-pumping • **GENTLE** on cylinder walls

CHROME-FACED FOR HEAVY-DUTY SERVICE

*Always in the
Picture!*



If It's Assembled
With Form-A-Gasket
It's Leakproof!

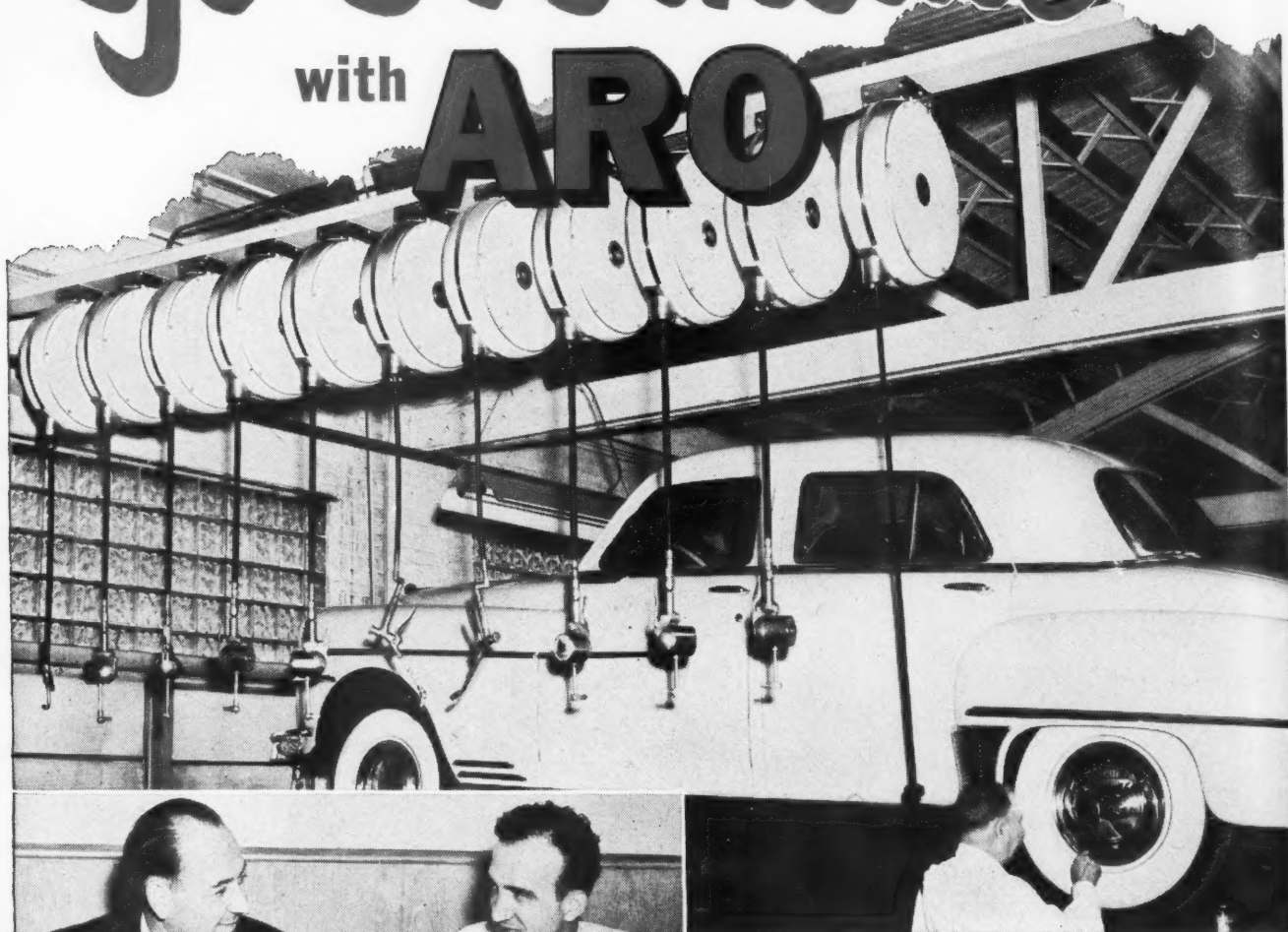
Form-A-Gasket No. 1, Fast Drying Paste... Hard Setting
Form-A-Gasket No. 2, Non-Hardening Paste... Stays Pliable
Aviation Form-A-Gasket No. 3, Heavy Liquid... Remains Tacky

PERMATEX COMPANY, INC., BROOKLYN 35, N.Y.

Go Overhead

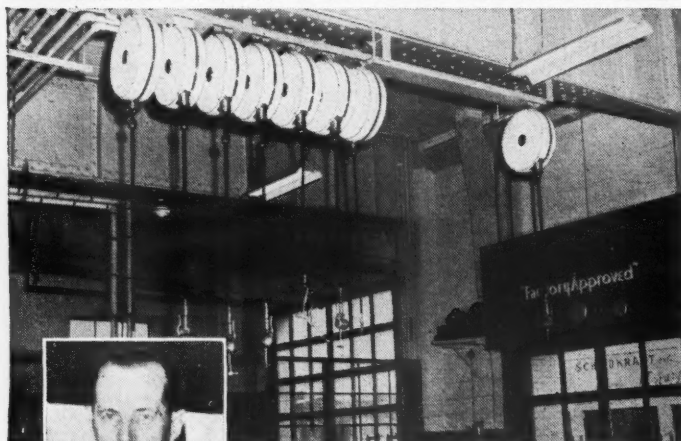
with

ARO



"Took a tip from a factory assembly line—installed ARO Overhead Reels!" says Charles O. Gracey, vice president of Colonial Motors, Inc., Chicago, talking with Al Ricci, service manager. "ARO is tops for saving time and increasing lube profits!"

Gain Lube Space and Profit!



"We found that ceiling space is just as good as floor space for lube work—handy, too!" says Lester H. Tillman, vice president of Jamaica Lincoln & Mercury Corp., Jamaica, N. Y. "This ARO installation is a money-maker!"

Here's the MODERN LOW-COST way to expand your service facilities and INCREASE PROFITS!

Clear your floor for ACTION... use ARO Reels overhead! More "bend-over" space... reduce hose wear... all control nozzles handy for chassis grease, gear oils, motor oils, water and air.

SEE YOUR ARO JOBBER

The Aro Equipment Corporation, Bryan, Ohio

Aro of Canada, Ltd., Toronto, Ont.

ARO

LUBE EQUIPMENT

ALSO... AIR TOOLS...
HYDRAULIC EQUIPMENT...
AIRCRAFT PRODUCTS...
GREASE FITTINGS...

Chilton's MOTOR AGE

WITH WHICH IS COMBINED AUTOMOBILE TRADE JOURNAL

Reg. U. S. Pat. Off.

for AUTOMOTIVE SERVICEMEN

Vol. LXIX, No. 12

November, 1950

In This Issue . . .

News scene	33
Service Industry News	36
Report to Our Readers	37
Business Guide	38
Hudson Adds the "Hornet"	39
Studebaker Introduces V-8 Engine	40
Lincoln and Mercury Announce 1951 Lines	42
Quick Oil Pressure Testsby Jack Montgomery	44
Spring Suspension Service	45
Tommy Screws Things Upby Charles M. Kenyon	46
How Much Oil Should a Car Use?by Paul S. Lane	48
Guarantee a Good Paint Job	50
How to Win Sales and Influence Customersby Frank P. Tighe	52
Readers' Clearing Houseby Jack Montgomery	55
New Car Registrations	56
Shop Kinks	58
New Products Show Window	62
Service Suggestions from the Factoriesby Wm. H. Lutton	67
Price, Weight and Body Table	68
Engine Specifications	70
Personals	72
Calendar of Coming Events	88
Advertisers' Index	160

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MOTOR AGE, Vol. LXIX, No. 12. Published monthly by Chilton Co., Chestnut & 56th Sts., Phila. 39, Pa. Entered as Second-Class Matter December 27, 1935, at the Post Office at Philadelphia, Pa.; Under the Act of Congress of March 3, 1879. In case of Non-Delivery Return Postage Guaranteed. Subscription price: United States, Mexico, United States Possessions, and all Latin-American countries \$3.00 per year. Canadian and foreign \$5.00 per year; single copies, 40 cents.

One of the Publications Owned by

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WEEDS...THE BEST TIRE CHAINS ...AND THE BEST-ADVERTISED

This page in color will open the campaign in THE SATURDAY EVENING POST

followed by advertisements in:

COLLIER'S
AMERICAN MAGAZINE
COSMOPOLITAN
PATHFINDER
KEYSTONE MOTORIST
NEW YORK MOTORIST
PENNSYLVANIA MOTORIST
COUNTRY GENTLEMAN
CAPPER'S FARMER
FARM JOURNAL
SUCCESSFUL FARMING
BREEDER'S GAZETTE
NATIONAL LIVESTOCK
PRODUCER
CORN BELT FARM DAILIES
POULTRY TRIBUNE
HOARD'S DAIRYMAN
NEW ENGLAND HOMESTEAD
RURAL NEW YORKER
PENNSYLVANIA FARMER
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PRAIRIE FARMER
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& IOWA HOMESTEAD
WISCONSIN AGRICULTURIST
& FARMER
MONTANA
FARMER-STOCKMAN
UTAH FARMER
IDAHO FARMER
OREGON FARMER
WASHINGTON FARMER

Also a campaign in:
COMMERCIAL CAR JOURNAL
FLEET OWNER
PUBLIC SAFETY
TRANSPORT TOPICS
BUS TRANSPORTATION

Order WEED Chains from your Jobber early.

Don't lose the profits from the first snow storm.

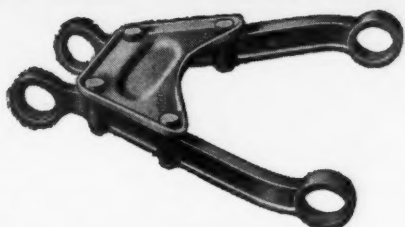
ACCO

York, Pa., Atlanta, Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, Portland, San Francisco, Bridgeport, Conn.

**AMERICAN CHAIN DIVISION
AMERICAN CHAIN & CABLE**

TRADE
MARK

In Business for Your Safety



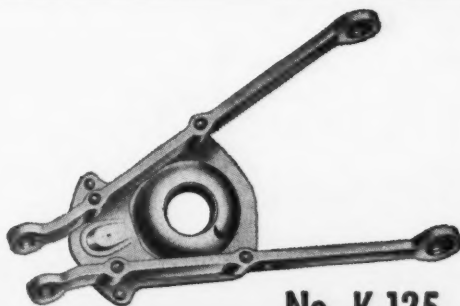
No. K-600 UPPER CONTROL ARM
for 1949-50 Chevrolet



No. K-131 "STA-TITE" PIVOT SHAFT KIT
for 1949-50 Chevrolet

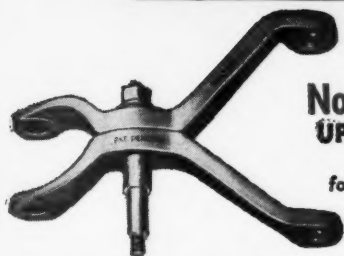


No. 808 IDLER ARM BRACKET
for 1949-50 Ford



No. K-125 UNIVERSAL LOWER CONTROL ARM ASSEMBLY
for 1939-49 Oldsmobile - Pontiac

**YOU CAN ONLY GET THESE
THROUGH MOOG**



Nos. K-762 & K-763 UPPER CONTROL ARMS
for 1940 Chrysler - DeSoto
for 1939-40 Dodge - Plymouth



Nos. 514-516-327 & 336 "STAY TIGHT" IDLER ARMS



Moog designs and makes a part to do a better job than the one it replaces. These developments by Moog Coil Action engineers have met wide acclaim from wheel alignment specialists. They recognize the time-saving installation features and the improved performance qualities. Remember, you can only get these exclusive Moog Replacement Parts thru Moog Distributors. Be front-end wise — get action with Moog Coil Action! Write for catalog, Dept. D.

**MOOG
COIL ACTION
PARTS**




MOOG INDUSTRIES, INC. ST. LOUIS 14, MO.

Divisions:
MOOG COIL ACTION PARTS CO.
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ST. LOUIS SPRING COMPANY



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MOOG



DELCO-REMY GENERATOR REGULATORS FOR DELCO-REMY ELECTRICAL SYSTEMS

Delco-Remy generator regulators are designed to match the performance of other Delco-Remy electrical units in the system . . . resistance values are selected to obtain maximum performance and life from the generator and battery, and contact point metals are chosen for best performance and longest life on each application. To maintain the original balance of the electrical system, only a Delco-Remy regulator of the proper model should be used as a replacement in a Delco-Remy equipped vehicle.

Delco-Remy

DIVISION, GENERAL MOTORS CORPORATION
ANDERSON, INDIANA

WHEREVER WHEELS TURN OR PROPELLERS SPIN



DELCO-REMY—A UNITED MOTORS LINE
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS

Not Impossible...but just try it!



Without trick photography, this balancing stunt would challenge any magician. It's almost as hard to balance *brakes* if you try to do it with only one type of lining! Different shoes do different work, need different types of lining. Grey-Rock gives you the balanced combinations of linings to provide longer life, equal wear on all shoes . . . to dampen noise . . . to eliminate grab, dive, hard pedal and other brake ills. For balanced, road-tested combinations, see your Grey-Rock jobber. Ask about the complete program for building your brake business.



*Nationally advertised in
The Saturday Evening Post,
Country Gentleman
and Holiday*

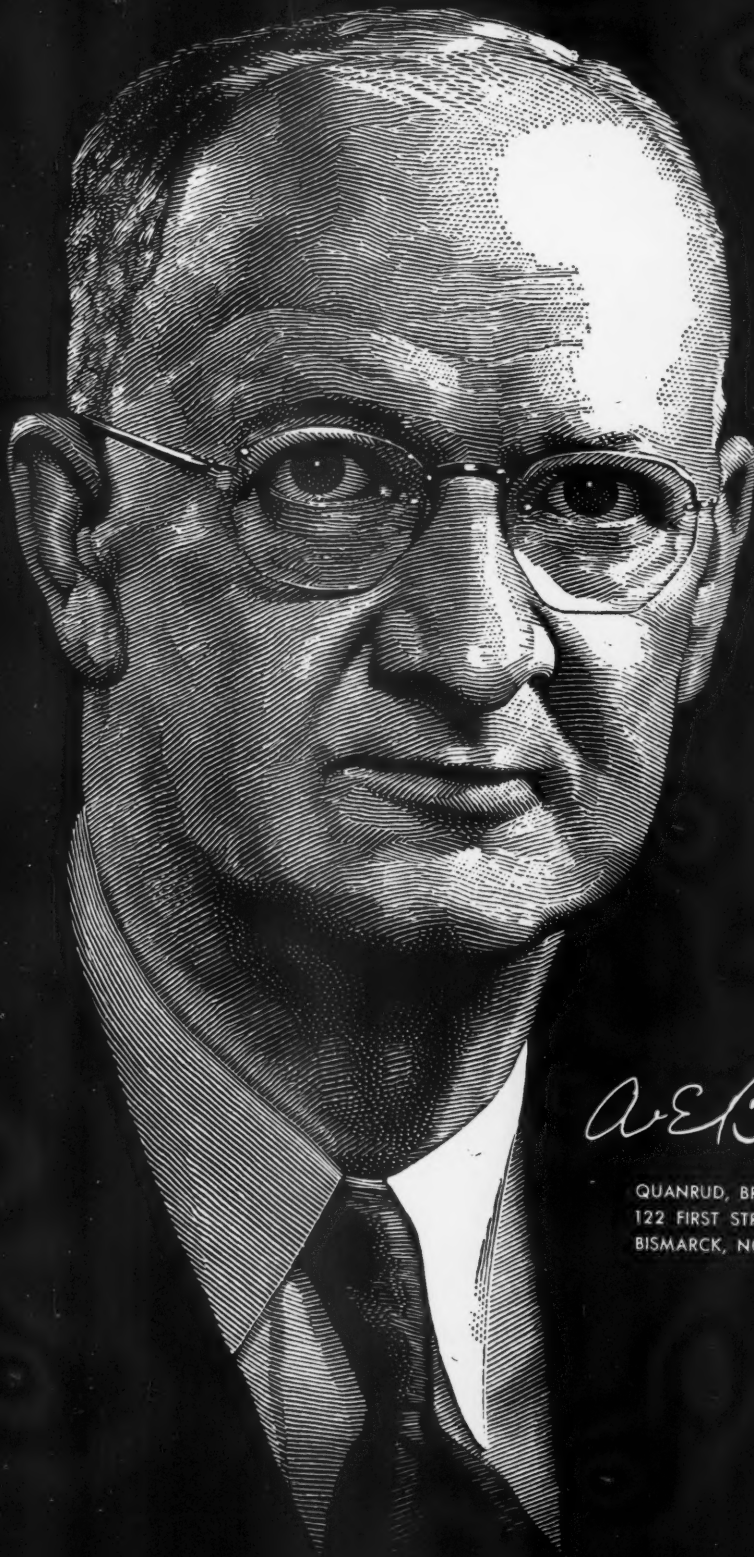


**Only
Grey-Rock
has
Balanced Braksets**

GREY-ROCK DIVISION of Raybestos-Manhattan, Inc., **Manheim, Pa.**



RAYBESTOS-MANHATTAN, INC., Manufacturers of Brake Linings • Brake Blocks • Clutch Facings
Fan Belts • Radiator Hose • Packings • Mechanical Rubber Products • Rubber Covered Equipment
Asbestos Textiles • Powdered Metal Products • Abrasive and Diamond Wheels • Bowling Balls



W. E. Brink

PRESIDENT

QUANRUD, BRINK & REIBOLD, INC.
122 FIRST STREET
BISMARCK, NORTH DAKOTA

"YOUR whole advertising program—in magazines, newspapers, radio and television—is sensational. No other line we carry gives as much as Auto-Lite Battery," is the way A. E. Brink puts it. "The Auto-Lite Battery Line is so complete we can cover every car and truck

owner and every fleet too. Your original equipment plan is mighty important, and then there's the Auto-Lite 'Sta-ful' Battery—one of the best profit items we handle. It's no wonder it pays to tie up with the Auto-Lite Battery Line."



AUTO-LITE BATTERIES



"Sell the best, tell the world"

... advises dealer Stan

Reading time: 1 minute, 35 seconds

Stan, like many other Dodge-Plymouth dealers, started out with no silver spoon in his mouth. Son of a veteran railroad worker, and one of 9 children, Stan was out hustling for a living at an early age. One of the customers on his newspaper route was the local automobile dealer, Mac. Stan recalls how Mac used to kid him good-naturedly by asking, "Going to be a railroad engineer when you grow up,



Stan?" And Mac would laugh uproariously when he replied, "Nope, going to sell automobiles and make a lot of money like you do!"

Stan was still in his teens when the opportunity came to work for his dealer friend, Mac. It was just a handyman job, but Stan saw in it the chance to get closer to the automobile business and learn more about the



cars that were so fascinating to him. When he wasn't pushing a broom, or trotting errands around the shop, Stan was asking questions, poking his head into car hoods, crowding close to the mechanics, watching. Soon he knew enough about cars to get a chance to check used car buys. He did so well at it that one day Mac called him in and said: "Stan, you've made real progress. You're learning the business fast. Monday I'm starting you on the road, buying used cars for me."

Meanwhile, the thrift habit Stan formed in his paper route days, was accumulating a tidy sum for him in the bank account. As he drove from



town to town, he'd envision his own dealership in operation . . . and his business philosophy, based on his past 10 years' experience, had taken shape in his mind. "Sell a quality product, and tell the world you have it."

In his travels Stan kept his eye open for a good new car dealership. At last fortune smiled. Stan hurried to the Detroit factory where his background impressed officials. Soon he had lined up necessary capital and was owner of a small but promising Dodge-Plymouth dealership on the outskirts of his home town.

With a quality line of products, Stan started to put his policy to work, telling the world he had 'em. Car and truck sales began to hum. "Trade-ins" poured in and bringing his long experience into full play, Stan made his "used car" operation the talk of the state.

Today, Stan's business is so successful he's been able to indulge his favorite hobby—raising high-grade cattle. He owns 5 fine farms that pay their way, with a handsome profit too. And how does he get peak demand and prices for his heifers? Why, by advertising, of course!

Stan sums up his success this way: "Any able man who'll work as I have can do it—providing, of course, he'll include my old recipe: 'Sell the best, and tell the world you've got it.'"

Write for our free booklet containing a number of these stories of accomplishments by enterprising men, Chrysler Corporation, 341 Massachusetts Ave., Highland Park 3, Michigan.



Chrysler Corporation

PLYMOUTH • DODGE • DE SOTO • CHRYSLER • DODGE "Job-Rated" TRUCKS
Fine Cars of Great Value

Snail

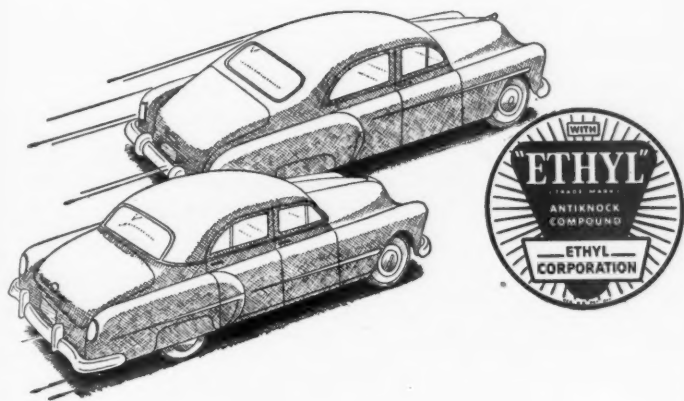


Quail



There's a tremendous difference between a "snail" and a "quail"

- and there is a powerful difference, too,
between performance and "Ethyl" performance!



Yes, there's a powerful difference between the performance of an engine using just gasoline and one using "Ethyl" gasoline. When you set the ignition of a modern high compression engine to take full advantage of "Ethyl" gasoline's higher antiknock quality, your customer gets "Ethyl" performance—more power, more mileage. And you get happier, more satisfied customers.

ETHYL CORPORATION, New York 17, New York

Other products sold under the "Ethyl" trade-mark: salt cake...ethylene dichloride...sodium (metallic)...chlorine (liquid)...oil soluble dye...benzene hexachloride (technical)

You're always on the beam with...

GUIDE FOG LAMPS

**for all
makes
of cars
and trucks**



Your customers can count on improved visibility under adverse weather conditions—you are assured new sales, new profits . . . with Guide universal fog lamps, designed to fit all makes of cars and trucks, *including latest models.*

Guide fog lamps are compact, sturdy, flexible . . . have a handsome, heavy chrome finish for long-lasting value. They come packaged in pairs, complete with fused switch, wiring and interchangeable mounting for rapid attachment to splash pan, bumper bracket or fender.

You're on the beam when you stock Guide fog lamps—the universal lamps, universally liked across the nation.



GUIDE LAMP—A UNITED MOTORS LINE
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS

***Guide* LAMP**

**Division of General Motors
Anderson, Indiana**



How to get the right gaskets . . . fast

Save time and trouble when you need cork gaskets by ordering Armstrong-Victor Cork Gasket Sets.

Just tell your jobber the make and year of engine and the kind of job you're doing. He can hand you all the cork gaskets you'll need immediately because they are pre-packaged in Armstrong-Victor Sets. What's more, there's no chance of mistakes—no time wasted going back to the jobber to replace a missing or incorrectly chosen gasket.

Armstrong-Victor Gaskets help speed your job, too. They always arrive flat, never distorted or stapled together—and they fit perfectly.

You can get Armstrong-Victor Cork Gaskets for every car, bus, truck, or stationary engine from leading jobbers everywhere. Victor Manufacturing and Gasket Company, 5750 Roosevelt Rd., Chicago 50, Ill.



LOOK FOR THE TWO NOTCHES



Exclusive Armstrong-Victor Replacement Gasket Trade-Mark

Armstrong-Victor



CORK COMPOSITION GASKETS • CORK SHEETS



"These features will help you SATISFY YOUR CUSTOMERS"

Oil is controlled more effectively in *any* engine because the expander of the Pedrick SS4 ring has the *widest spring range*. It takes care of a greater variation in piston groove *depths*. It enables the ring to conform better to taper and out-of-round.

There is plenty of space between the steel segment of the Pedrick SS4 ring to "reservoir" the oil for lubrication and to drain it away as fast as necessary. Free-flowing oil stops clogging from carbon.

Safety from scoring is assured because the

steel spacer has *reverse tension*. This unique steel spacer *never* rides on the cylinder wall.

Yes, here is an oil ring that will not let you down. Better than any other, it will control oil, conserve fuel, deliver full power, wear long and smoothly—and *satisfy your customers!*

Get Pedrick SS4 oil rings in *guaranteed ENGINEERED SETS* from your jobber. WILKENING MANUFACTURING CO., Philadelphia 42, Pa. *In Canada:* Wilkening Manufacturing Co. (Canada) Ltd., Toronto.

FOR 30 YEARS, SUPPLIER OF PISTON RINGS TO LEADING VEHICLE AND ENGINE MANUFACTURERS.

Pedrick
"HEAT-SHAPED"
PISTON RINGS



DISPLAY THIS SIGN
It tells car owners that they can get PISTON RING SERVICE in your shop. Available to Pedrick Franchise Dealers.



It does so much!
It costs so little!

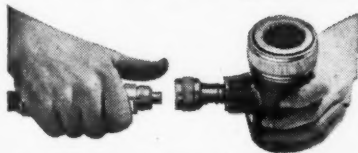
you can't afford to be without

Porto-Power®



"I'VE SAVED BIG MONEY AND MADE
A LOT MORE PROFIT . . . BECAUSE MY ONE
PUMP AND ONE HOSE SERVE
ALL SIX OF THESE RAMS!"

**Only Porto-Power offers this vital
interchangeability of rams**



In 30 Seconds . . .
you can disconnect
a "Porto-Power" hy-
draulic ram from the pressure hose and connect up to
any one of several other "Porto-Power" rams.

You don't need tools to do it . . . only a finger twirl
on the exclusive "Spee-D-Coupler." Just think of the sav-
ing in not having to buy a separate pump and hose for
each ram! And think of the extra profits you collect by
having a whole *team* of rams!

All this is why it's so extremely important to make
Blackhawk "Porto-Power" your choice.



Couple your hose to this
10-TON RAM

Here's the most widely-used
ram ever designed. Bank on
it for all general work.



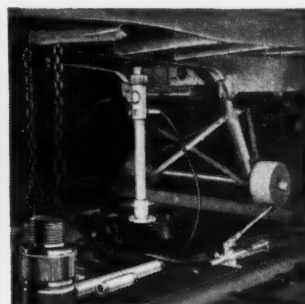
OR...connect to the
7-TON RAM

You can switch in a flash
to this "shorty" for pow-
er in the tight spots.



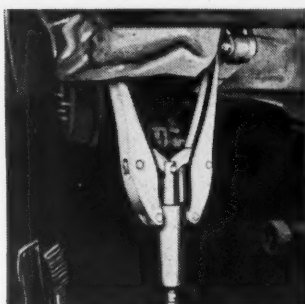
OR...connect to the
WEDGIE

Use this on spread and
dolly jobs where clear-
ance is a minimum.



OR...connect to the
20-TON RAM

When whopper trucks and
extra-heavy jobs come
along—this is your ace!



OR...connect to the
SPRED-RAM

Here's a new one! It spreads
crushed fenders and pries
bodies away from frames.



OR...connect to the
MIDGET RAM

Reach for this to get 4-ton
of power inside a box
frame or thimble-size area.



**Choose your attachments
from this new display**

Your Blackhawk Jobber will have this
handy exhibit near his counter—to help
you bring your "Porto-Power" up to full
profit power.

"Porto-Power" is the exclusive (trade
name registered) product of Blackhawk
Mfg. Co., Dept. P-6110, Milwaukee 1,
Wis.

BLACKHAWK
"RECK-RACK" • HYDRAULIC JACKS • WRENCHES

Now! 100% more protection

Why
today's driving
conditions require
this revolutionary
new battery

1

Car owners are driving more than ever before — and more mileage means more battery wear. Batteries must have added stamina to withstand added mileage!

2

Batteries are being charged more—not only over more miles, but, also, at higher rates. Batteries must be designed to withstand additional charging!

3

Higher compression motors are here — and they require more battery power. For quick, sure starts in any weather, batteries must have added starting power!

4

Today, batteries are under the hood — for easier, quicker inspection and service. But under-the-hood batteries must be able to withstand under-the-hood temperatures!



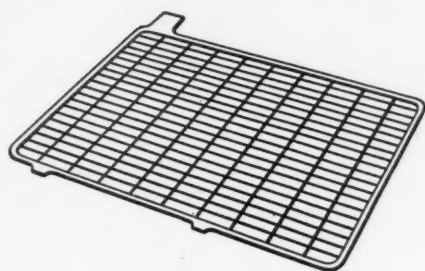
WILLARD STORAGE BATTERY COMPANY • Cleveland • Los Angeles • Dallas • Memphis • Portland • Toronto

New Willard Super

against the No.1 battery killer

Willard *announces*

METALEX



THE METALEX GRID—

Plus 4 other features—
makes the new Willard Super Master
custom-built for today's
driving conditions. Ask the
Willard Salesman for
complete details!

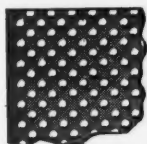
greatest battery improvement in 25 years

Today, OVERCHARGING is the No. 1 battery killer. More batteries are worn out from this one cause than from all other causes combined! Overcharging strikes directly at the grids—corrodes them—fractures them—destroys their ability to retain active material—destroys their utility as current conductors.

But now Willard announces METALEX—a new and vastly superior grid metal, developed and perfected by Willard metallurgists specifically to combat damage by overcharging. And METALEX does so—stubbornly, effectively. METALEX provides a full 100% more protection against the No. 1 battery killer! METALEX l-e-n-g-t-h-e-n-s battery life. Available exclusively in Willard Super Master Batteries, METALEX gives Willard Dealers the most important single selling advantage any battery has had in a quarter of a century.

NEW

IMPROVED RUBBER INSULATOR FOR LONGER LIFE



Impervious to effects
of high charging rates
and high, under-the-
hood temperatures...
L-e-n-g-t-h-e-n-s bat-
tery life!

NEW

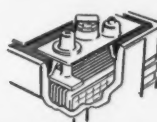
IMPROVED RUBBER CONTAINER FOR LONGER LIFE



New design—heavily
reinforced at points of
stress. Withstands high,
under-the-hood tempera-
tures. L-e-n-g-t-h-e-n-s
battery life!

NEW

IMPROVED SEALING COMPOUND FOR LONGER LIFE



Will neither crack in
winter nor melt in sum-
mer. Withstands high,
under-the-hood tempera-
tures. L-e-n-g-t-h-e-n-s
battery life!

NEW

IMPROVED ACTIVE MATERIAL FOR QUICKER STARTS



So much more chemically
active, that snap starts are
assured—even in cars pow-
ered by the new higher
compression motors!

Master *with* METALEX

"Dynamically Displayed!"



CAMPBELL CHAINS

Sell on Sight!



PREPARE yourself for full chain profits with an adequate stock of Campbell tire chains and this powerful sales-producing display. Easy to set up, the new display sign is equally effective outdoors, in windows, on counter or wall.

Your Campbell jobber can show you how to set up attractive window and counter displays using the new sign and the sturdy Campbell boxes. Convenient wall chart with chain sizes and prices also available.

Sell Campbell Chains—the chains that sell on sight, because they are safer, longer-wearing, and conveniently and attractively packaged.



CAMPBELL CHAIN Company

Main Office—York, Pa.

Factories—York, Pa. and West Burlington, Iowa

A Complete Line of Tire Chains for Passenger Cars, Buses, Trucks and Tractors

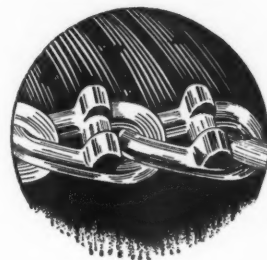
Another sales aid—Campbell's new consumer booklet to help you develop chain prospects and close difficult sales. Write for your FREE sample copy now.



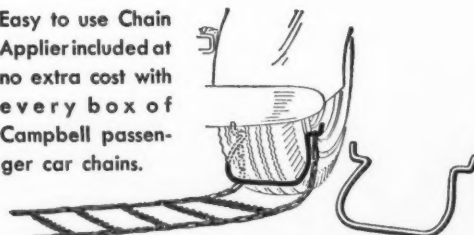
Campbell Chains come attractively packaged in boxes and bags, easily identifiable and easier to sell.

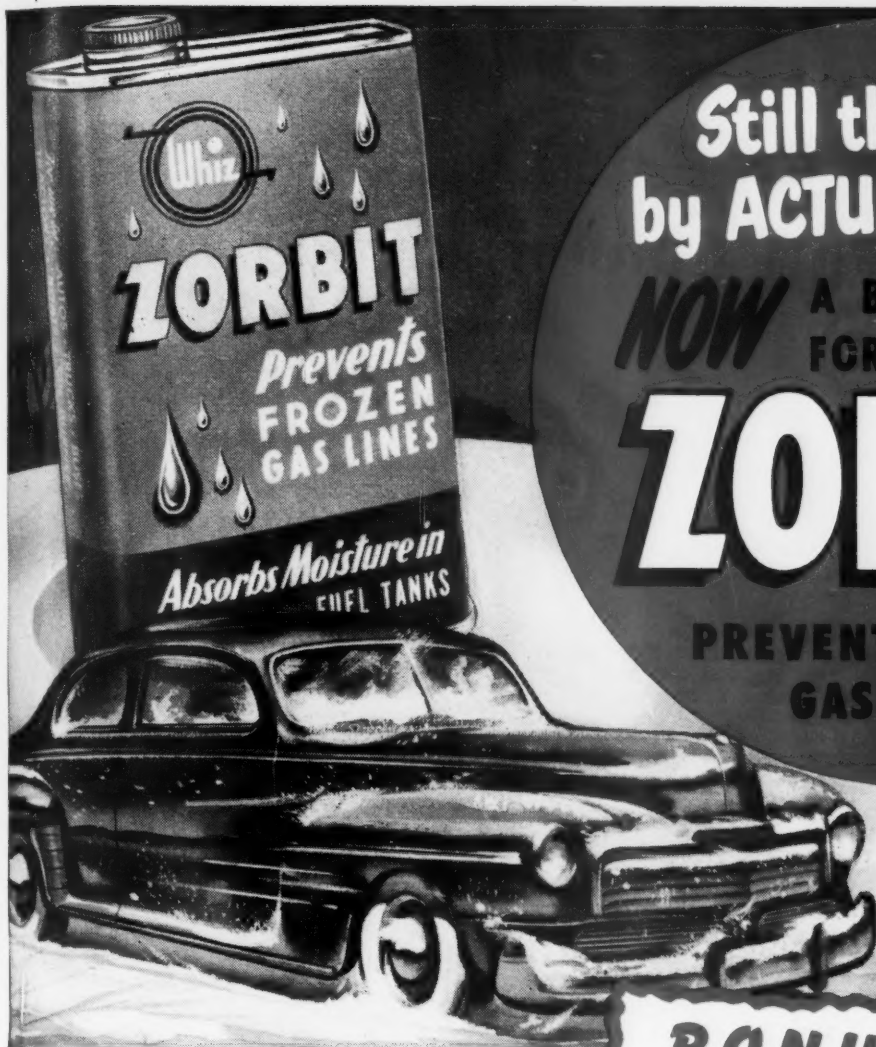


Only Campbell Tire Chains have the patented lug-reinforced construction that assures long wear and safe stopping and starting traction.



Easy to use Chain Applier included at no extra cost with every box of Campbell passenger car chains.





Still the Best
by **ACTUAL TEST!**

NOW A BONUS WINNER
FOR DEALERS!

ZORBIT

**PREVENTS FROZEN
GAS LINES**



WHIZ ZORBIT is still the one gas line anti-freeze that gives you proof of performance under sub-zero conditions! A product of the well-known WHIZ chemical laboratories, ZORBIT offers you further proof of quality in the report of the Pittsburgh Testing Laboratory. "Best freeze protection of five leading brands" reports this famous testing company.

ZORBIT performance is backed by a double-money-back guarantee—here's proven performance, guaranteed performance in a fast-moving, high profit item. Get ZORBIT now for cold weather profits!



Member of M.E.M.A.,
N.S.P.A. and A.E.R.A.



R. M. HOLLINGSHEAD CORPORATION • Camden 2, N. J.

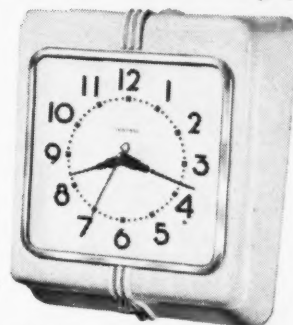
LEADER IN MAINTENANCE CHEMICALS

Canadian Offices: Toronto • Warehouses: Dallas, San Francisco, Chicago

BONUS OFFER!

SELF-STARTING ELECTRIC CLOCK

Regularly \$4.95 plus tax. Beautifully designed for home or office use. Large 5" dial. Smart white plastic "tilted" case. Sweep second hand, 60 cycle, 110-125 volts.



DEALER SPECIAL—WHIZ DEAL 50-Z

YOU BUY

2 cases (48 pints) ZORBIT.....**\$21.60**

BONUS

Self-Starting Electric Clock..... **N/C**

YOU GET \$26.55 Value for only.....\$21.60

We must reserve the right to substitute an electric clock of equal value if delivery necessitates a substitution.

The Progressive Farmer

RUNNING ON BORROWED TIME?

GET A NEW

AC

**FUEL
PUMP**



LIFE

Country Gentleman

**NEW CHEMICAL WEAPON
FOR FARMS, Jan. Page 25**
Hot Weather Study Builders
COUNTRY GENTLEMAN, Page 22

POST

Successful Farming

Collier's



**You're in the
Driver's Seat**

with AC Fuel Pumps

If you handle AC Fuel Pumps, November will be your bandwagon month. Here's why—

You get the arresting poster shown here. With it, go two window cutouts and a gold mine of selling information.

You also get the backing of the industry's oldest national advertising campaign on pumps. Look at the magazine names. Look at how many people the advertising will reach!

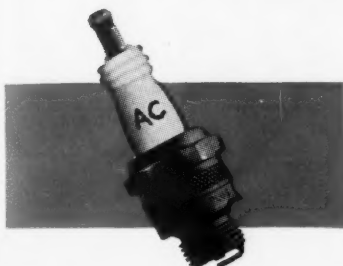
Stock up! Brief your employees! Now's the time when you can sell pumps as a preventive maintenance idea—to forestall trouble in the cold months ahead. Get details from your jobber.

56,000,000 Ad Readers — coast to coast!

6 MORE SERVICE ESSENTIALS...

ALL

AC

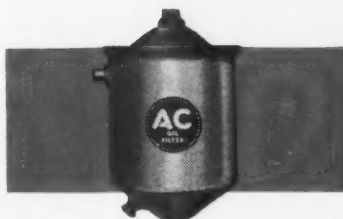


AC Spark Plugs with patented CORALOX Insulator

More and more vehicle owners want AC's with **CORALOX** Insulator, greatest spark plug advancement since the one-piece plug. Increase your service sales by replacing worn plugs with widely advertised AC's, with **patented CORALOX** Insulator.

AC

SPARK PLUGS

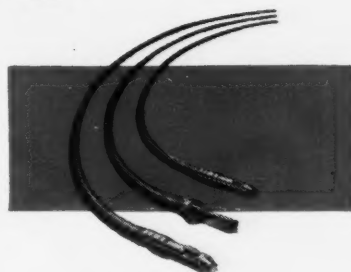


AC Oil Filters and Elements "Dirt-Proof" Engine Oil

AC's big "Dirt-Proof" campaign is now in its second year, building a tremendous Replacement Element business for AC dealers. There's an AC Filter for nearly every engine—an AC Element for almost every make of oil filter. Cash in on this volume market.

AC

OIL FILTERS

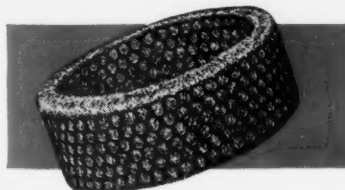


AC Speedometer Cable-Casing Assemblies

AC excels in quality because of AC's patented machines and processes. Original equipment on half the cars on the road. Tailor-made assemblies packaged for replacement. Bulk cable and casing, with parts, also available.

AC

CABLE & CASING

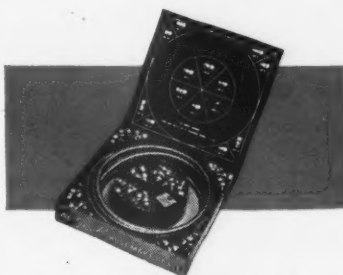


AC Air Cleaners and Elements

AC is the big name in Air Cleaners, too, backed by tremendous original equipment volume. Heavy duty cleaners for cars, tractors and trucks. Low-cost renewal elements available.

AC

AIR CLEANERS



AC Flexible Gasoline and Oil Lines

This complete AC Make-up Kit is for dealers who prefer to make their own flexible line assemblies. Tailor-made assemblies are also available, with an attractive Wall Merchandiser which stocks and sells. Sell new lines when you install Filters and Fuel Pumps.

AC

FLEXIBLE LINES



AC Gasoline Strainers

Put this AC Counter Cutout on your showcase. It sells. The AC Strainer Element is fibre disc, impregnated with Bakelite, for definite and controlled porosity. Every engine needs a good gasoline strainer, to protect the carburetor.

AC

GASOLINE STRAINERS



IN MINNEAPOLIS
IT TOOK
JUST THIRTY DAYS

...TO COMPLETELY TURN OVER
HOLLEY'S #85R-176
ORIGINAL EQUIPMENT PACKAGE

...IN THE
KEEFE & WATRY
GARAGE



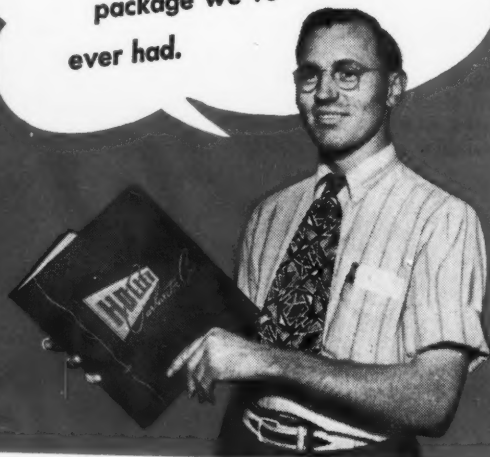
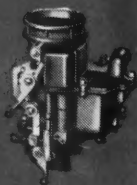
Win Albrecht, owner of Keefe & Watry, says:

The 85R-176 package gives us a complete line of Holley original equipment at our finger tips. It's the most profitable package we've ever had.

HOLLEY
Carburetor Co.

5930 VANCOUVER AVE., DETROIT 4, MICH.

FOR HALF A CENTURY—ORIGINAL EQUIPMENT
MANUFACTURERS FOR THE AUTOMOTIVE INDUSTRY



IT'S HERE...

WIXITE

(PATENT PENDING)

THE GREATEST FILTRANT DEVELOPMENT IN OIL FILTER HISTORY

- A WIXITE Cartridge contains countless tiny sludge traps which envelop all foreign particles in the oil, providing both depth and surface filtration.
- The sensational performance of WIXITE makes selling easier and more profitable for you.
- WIX Replacement Cartridges containing WIXITE are available through your local jobber... NOW.

WIXITE is new... utterly new. Backed by years of research, cutting clean through old concepts of filtering efficiency, WIXITE opens an entirely new era in oil filtration. You will find spectacular performance in WIXITE... GREATER SLUDGE AND DIRT REMOVAL... GREATER RATE OF FLOW... GREATER MILEAGE. And when we say GREATER, we mean DOUBLE the results motorists are now getting.

From the beginning of automotive oil filtration, cotton threads have been the most widely accepted and endorsed filtering medium. WIX has now improved upon the performance of cotton threads by blending a material which **ALLOWS THE UTILIZATION OF THE ENTIRE THREAD CONTENT**. This amazing new medium — WIXITE — properly blended and carefully packed by WIX, insures users of more than double the life expectancy formerly offered with *ANY* filtering medium.

WIXITE makes oil filter dollars go farther... makes sales and profits roll in faster, because your customers, noting the superior performance of WIXITE, naturally will demand it. WIXITE Replacement Cartridges are available for Passenger Cars, Trucks, Buses, Tractors and Stationary Engines. Write for the full story today.

wix

TRADE MARK

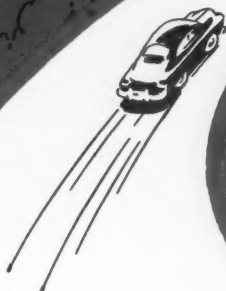
REG.

ENGINEERED FILTRATION



WIX ACCESSORIES CORP'N. • GASTONIA, N. C.

CANADIAN FACTORY: WIX ACCESSORIES CORP. LTD., 11 Wabash Ave., Toronto 3, Ont.



Let's Stop PINCH-PENNY SELLING!



WHAT IS PINCH-PENNY SELLING?

Here's one example . . . to replace a set of spark plugs—and not replace the old ignition wires is pinch-penny selling. New spark plugs can't give peak performance through old wires, (see table at right).

When the customer comes back still having trouble, and you ask him to pay for new ignition wires, he balks—claims that if they were needed you should have replaced them in the first place. A customer always kicks about paying anything—no matter how little—for a “make-good” job. He refuses to accept your explanation that you were trying to save him money.

It's wrong to sell a man anything he doesn't really need. But it's just as wrong not to sell a customer what he *does* need to assure peak performance. Pinch-penny selling gets you into trouble . . . costs you business . . . robs you of profits . . . loses customers. Therefore, never install new spark plugs without installing new ignition wires.

• For the second consecutive year, three of the first eight cars at the Indianapolis Race in 1950 were equipped with Crescent Wiry Joe. They know the difference that good ignition wire makes.

DYNAMOMETER TESTS

Prove

NEW IGNITION WIRES MAKE BIG DIFFERENCE IN ENGINE PERFORMANCE

The following table gives results of dynamometer tests on a 1935 Oldsmobile before and after installation of a new set of Crescent 90-05 High Tension Ignition Wires.

	Old Wires	New Wires	Increase
1. Motor RPM	700	1000	42.75%
2. Torque	22	27	22.75%
3. MPH after full load	14	18	28.6 %
4. Load applied at (MPH)	45	45	
5. Time required for breakdown from (4) to (3) above	20 sec.	45 sec.	125. %

NOTE: No adjustment or replacement other than installation of new Crescent ignition wires were made to the car tested.



THE CRESCENT COMPANY, INC., Pawtucket, R. I.

Check the wire and cable on every car!

Want customers to have a good picture of you?

CUSTOMERS will take away a better impression of you if they know you always use the finest in replacement parts. And one of the best ways to let them know it is to point out the "Timken®" trade-mark on every tapered roller bearing you install.

"Timken" means top quality to car owners everywhere because years of outstanding performance and steady advertising have made Timken the leading name in bearings. Customers can't help but have a good picture of your service if you . . .



... Just tell 'em it's **"TIMKEN"**®



Timken tapered roller bearings usually outlast the automobiles in which they're installed. They take radial and thrust loads in any combination, eliminate friction, hold wear to a minimum, and keep parts in positive alignment.

You find them in most leading makes of automobiles, trucks, tractors, and busses.

So why take chances with your reputation for topnotch service? Be sure the trade-mark "Timken" is on every tapered roller bearing you buy. **SEND FOR FREE BOOKLET: *Timken Tapered Roller Bearings, Their Care and Maintenance*.** Contains 20 pages of practical tips for mechanics, garage men and fleet operators. Write Dept. AM-11, The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN

TRADE MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL  NOT JUST A ROLLER  THE TIMKEN TAPERED ROLLER  BEARING TAKES RADIAL  AND THRUST  LOADS OR ANY COMBINATION 

YOUR 1951 PRIZE PACKAGE..M



MOLDED DOR-TITE DISPENSER WORKS LIKE A CHARM!

"Pipes" says: "This new Molded Dor-Tite dispenser's the neatest trick I ever saw. Pull on the Dor-Tite and out she comes easy-like—as little or as much as you need. It keeps the Dor-Tite clean and fresh, always handy to you. Brother, this is one gasket that won't foul up or roll away while you are using it!"

"It's a 'pipe' with Dor-Tite"

Copyright 1950, Durkee-Atwood Co.

DURKEE-ATWOOD

MOLDED DOR-TITE *Door & Trunk* GASKET

YOUR MOLDED DOR-TITE PRIZE PACKAGE IS LOADED WITH PROFITABLE SURPRISES



EXCLUSIVE CLUTCH-FEED DISPENSER . . . Simple, convenient, protects and preserves. Provides just the right tension for smooth feed-out with positive control. The Dor-Tite can't snarl up—the square package can't roll away. It keeps out light and dust and protects the Dor-Tite until it's used.

TYPES TO FIT MOST APPLICATIONS . . . Molded Dor-Tite comes in sizes and shapes that fit the majority of cars and commercial vehicles. Both the door types and trunk types come in the exclusive pull-out dispenser, packed in shop-size lengths.



NON-STRETCH CONSTRUCTION . . . No stretching or creeping with Dor-Tite, no wrinkles. The door types are made with an imbedded cord that assures perfect positioning.

DUPLICATES ORIGINAL EQUIPMENT . . . Molded Dor-Tite makes it easy for you to offer "like-new" applications. Note the color of Molded Dor-Tite—it's solid black, without a speck of mica dust to gray it.



DEPENDABLE ADHESIVE . . . Dor-Tite is easy to apply—and it stays put. The factory-applied adhesive on the door types never deteriorates and, like the Durkee-Atwood Liquid Adhesive used for trunk applications, is especially formulated for tack and strength.

FINEST QUALITY . . . Leave it to Durkee-Atwood, the originator of sponge rubber gasket, to bring you the finest in material, the most uniform in shape. You can be proud of every installation!

THIS IS THE SEASON FOR EASY PROFITS WITH ALL-PURPOSE STANDARD DOR-TITE

Sell Standard Dor-Tite for home use—for weatherstripping doors and windows and its many other applications around the household and automobile. Standard Dor-Tite now comes in either black or Non-Stain (off-white in color). Feature both—they are attractively priced, profitable display items. Packaged in handy 10-foot rolls.



TODAY'S THE DAY
TO SEND FOR FREE
MOLDED DOR-TITE
INFORMATION



Durkee-Atwood Company, Dept. MA-11
Minneapolis 13, Minnesota

Gentlemen: When an idea appeals to me I want to know more about it. Send your catalog and the name of your nearest jobber.

Name _____

Address _____

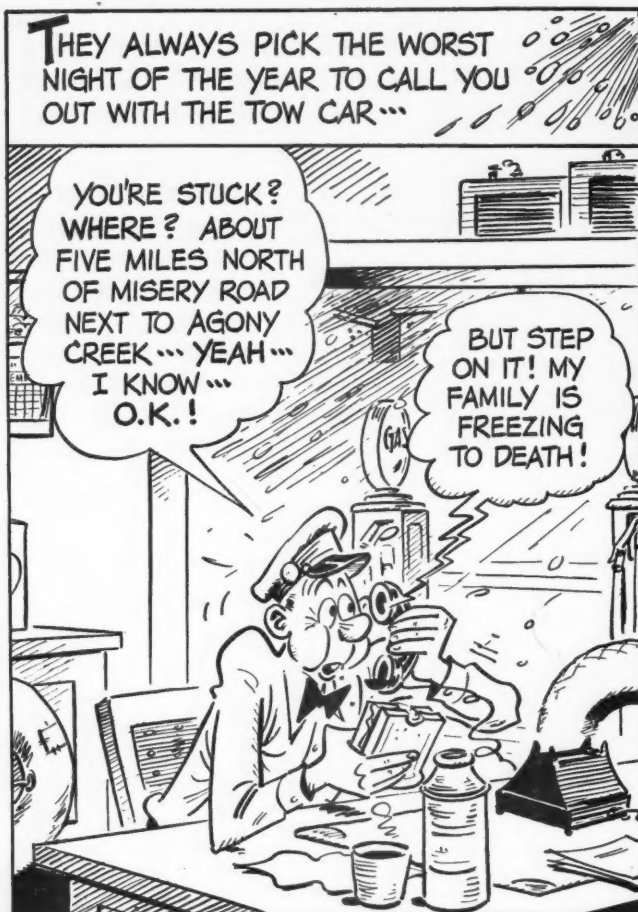
City _____ Zone _____ State _____

COMPANY

MINNEAPOLIS 13, MINNESOTA

"THEY NEVER MISS ...!"

by Gum



Copyright 1950, Prest-O-Lite Battery Company, Inc.

Out in the cold? Sell Prest-o-lite

Look How You Build Volume and Profit

- ★ **SENSATIONAL HI-LEVEL**—needs water only 3 times a year.* 70% longer average life in tests conducted according to S.A.E. Life Cycle Standards.
- ★ **COLOR PAGES IN NATIONAL MAGAZINES**—national consumer and farm coverage in leading magazines reaching over 13,000,000 homes.
- ★ **OUTSTANDING DEALER PROGRAM**—sales stimulators, signs, counter cards and direct mail—everything you need to boost sales. See your local jobber or write to

PREST-O-LITE BATTERY COMPANY, INC.
Toledo 1 Ohio

*FREE...! Cartoon Book
Write for your copy today!*



prest-o-lite
hi-level battery

... needs water only 3 times a year!*

*In normal car use

MOPAR

TRADE MARK



MOPAR is the trade mark for parts and accessories factory-engineered and inspected by Chrysler Corporation for Plymouth, Dodge, De Soto and Chrysler cars and Dodge *"Job-Rated"* trucks.

Chrysler Motors Parts Corporation makes MOPAR parts available to you at Plymouth, Dodge, De Soto and Chrysler dealers everywhere.

Remember the name—MOPAR. It is our way of saying, "These parts are made right . . . fit right . . . work right!"

For complete satisfaction, always install MOPAR parts and accessories in all vehicles built by Chrysler Corporation.

You can get
MOPAR parts
from dealers

FOR

PLYMOUTH • DODGE • DE SOTO • CHRYSLER
CARS • DODGE *"Job-Rated"* TRUCKS

... and from many garages and service stations

CHRYSLER MOTORS PARTS CORPORATION • DETROIT 31, MICH.



IT TAKES A HOT-FOOT WITH A GRIN!

One thing is certain: the Blue Streak contact in this breaker plate can take more punishment with less squawking than any other contact in the business. That's why it outlasts them all.

It has a contact area that is 55.4% larger than ordinary points—a special Blue Streak feature to reduce the heat of the arc-at-break. Instead of ordinary tungsten, the Blue Streak point is made of high amperage tungsten. Not only can it carry more current,

longer—it does so with hardly any burning or pitting.

The full length copper shunt cuts down resistance—allows the coil to deliver full power. The springs . . . the body—every part is precisely formed and, every piece is individually inspected to assure perfect fit.

Yes, you'll pay a few pennies more for this Blue Streak point but its quality assures longer life—it builds and insures your reputation.

better your business... buy Blue Streak

STARTING, LIGHTING, IGNITION PRODUCTS, WIRE AND CABLE
STANDARD MOTOR PRODUCTS, INC., LONG ISLAND CITY 1, NEW YORK

*All-weather protection
Graceful styling*

FULTON SIDE SHIELDS



*Ideal companion
equipment to sell with
the famous
Fulton Sun Shield*

MEET A NEED... MAKE A SALE!

Here's your answer for that "stuffy car" trouble in rainy, sleety, snowy weather. Fulton Side Shields permit lowering windows even in a driving rain storm — let fresh air in, avoid stuffiness and fogging glass.

Easily attached, securely held by stainless steel spring clips. Weather-tight rubber seal strips. Made of aluminum — Pearl Gray Lustre finish. Can be painted to match car. List, \$7.95 per pair.

DECORATIVE, PRACTICAL!



NO. J-51 JET AERIAL BOOSTER

A snappy, quality touch of color to match the finest car. Also helps bring in those hard-to-get radio stations. Made of aluminum — 4 brilliant colors — "Jet Flash" plastic ribbons. Quickly attached to car aerial.

THIS IS SIDE SHIELD SEASON . . . ORDER FROM YOUR JOBBER TODAY

THE FULTON COMPANY

1912 SOUTH 82ND STREET

MILWAUKEE 14, WISCONSIN

Designers and Manufacturers of Automotive Equipment Since 1911



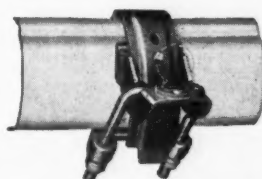
NO. 317
STEERING
WHEEL
SPINNER

Sparkling, jewel-like knob of clear and colored lucite. Lustrous, streamlined chrome base and bearing pin. Assorted colors. Twin band mounting.



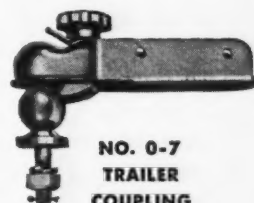
NO. 36 DE LUXE
TRAFFIC LIGHT FINDER

Large size, instantly adjustable to suit any driver. Mounts securely to windshield molding. No. 34, smaller lens, attached to windshield by vacuum cup.



NO. 25 BUMPER CLAMP

Rugged, safe, adjustable anchor for any size load the bumper can carry. All steel. Rubber cushion protects bumper. Fits nearly all late-model cars.



NO. 0-7
TRAILER
COUPLING

The coupling of top preference everywhere can be bolted or welded to trailer tongue. Hand wheel with positive safety latch makes attaching easy.

Sealed Power MD-50 STEEL OIL RING

The only ring with the *FULL-FLOW SPRING* . . .

insures a

FULL FLOW OF OIL

through ring, through spring,
through piston oil holes,
back to crankcase!



Best for oil control
even in
BADLY TAPERED
and
OUT-OF-ROUND BORES

SEALED POWER CORPORATION, MUSKEGON, MICHIGAN



Sealed Power Piston Rings

BEST IN NEW CARS

BEST IN OLD CARS

MOTOR AGE

November • 1950



The recently crowned Miss America of 1951, Yolande Betbeze, will be official hostess of the Hollingshead Whiz booth at the A.S.I. Show in Chicago, according to an announcement by R. M. Hollingshead Corporation officials. Miss America will not only greet visitors to the Hollingshead booth but will also pose for photos with them at the booth.

newscene..

“We Will Attend the A.S.I. Show”

Bright yellow store banners, local newspaper stories, local advertising and personal letters with this message are identifying to car dealers and garage and service station operators their progressive local automotive jobbers who will attend the 25th Automotive Service Industries Show in Chicago December 4-8.

Behind the message and its enthusiastic support by jobbers is the purpose of emphasizing to the trade the important fact that only through attendance at the show can participating jobbers introduce and make available to their local trade early in 1951 the scores of new products and developments to be unveiled at Chicago.

A. B. Coffman, manager of the A. S. I. Show, points out that “the 1950 show will be the first one in two years, and jobbers don’t want to wait for manufacturers to come to them with their big 1951 programs. Rather, the jobbers choose to come to Chicago, where they can see everything new for ’51 under one roof and arrange to have it in their own stores for

presentation and delivery in the spring.”

Coffman stated that to carry this story to their customers, more
(Continued on page 114)

Predictions:

While Cadillac at first will be the only GM Division to have the twin converter automatic transmission next year, at least one other division is working on a similar device. Buick and Chevrolet at present are planning to stick with their torque converters, but Oldsmobile and Pontiac eventually are expected to follow with the Cadillac type of transmission.

• • •

One of the independents may bring out a continental type high priced sports car next year. There is nothing definite at present, but the company does have tentative plans for such a vehicle.

Mechanics Scarce Again

The shortage of manpower in certain skilled occupations continues to grow as the defense program barges ahead. The hardest to fill jobs are to be found in the metalworking trades but a high rate of job openings are reported for motor vehicle mechanics and repairmen, welders and electricians as well. While there is no real problem as yet, a manpower division is being developed for Defense Transportation Administration against the time when manpower demands from the military services and war plants begin to seriously affect maintenance work of the automotive industries.



Speaking of "flying saucers," here's the real McCoy. An experimental job, this 41 inch, 20 pound model spins around in a 36 foot circle at 72 mph. The saucer has vanes which open by centrifugal force as the disk rotates, in the manner of a helicopter. Dr. Kay, the inventor, anticipates replacing the propeller with a jet engine on future models.

Gasoline Quality

Increased military demands for aviation gasoline is seen as certain to cut into the quality of motor fuel for non-military use. But the government is not likely to step into the picture with limitation orders for some time to come. Best guess now is that restrictive action will not come up before the middle of next year. Gasoline rationing is not in the picture at all in the foreseeable future.

Greece's Gains

Marshall Plan funds are being used to introduce American preventive maintenance and safety practices to Greek motorists. The little nation is setting up an automobile inspection system along the lines of those in most of the United States. Thanks to Marshall Plan money the first of such stations is nearing completion in Athens. It will be able to handle up to 180 cars and trucks a day.

Anti-freeze

Automotive engineers have known for years that premium priced permanent types of anti-freeze are not required for the majority of automobiles on the road. Now one of the largest man-

ufacturers of anti-freeze, duPont, has gone on record saying that 80 per cent of cars currently in use can be protected adequately with the standard priced product. As a result of research dating back to 1933, duPont says that the premium priced anti-freeze is required only in cars equipped with high temperature thermostats, those operated in sections where temperatures under 30 degrees below zero prevail, and those operated at high altitudes.

Tire Supply

Even though use of natural and synthetic rubber has been cut about 20 per cent by NPA for the months of November and December, there should be enough tires to meet all essential needs if large-scale panic buying does not again flare up. The restriction came at a time when tire sales normally are declining following the summer upsurge. Scare buying that had been prevalent during the height of the Korean War had tapered off by October, and if the new rubber curtailment does not touch off another buying wave, tires should be available for all required uses. Even after the cut-back, rubber consumption still will be at about the level prevailing before the Korean War started.

Craftsman's Guild

The 1951 model car competition of the Fisher Body Craftsman's Guild is offering \$65,000 in cash awards and university scholarships to the nation's best 'teen-age model automobile designers and builders. W. S. McLean, secretary of the Guild, has announced.

Enrollments already are being taken for the competition by Guild field representatives who personally are visiting many of the public and parochial schools throughout the country, McLean said.

To date, the Craftsman's Guild has awarded 99 university scholarships worth \$340,500. Cash and other awards made to youthful craftsmen to date total \$448,435. Altogether 9,546 boys have received state and regional awards in recognition of their skill in designing and building model automobiles.

Any boy in the United States between the ages of 12 and 20 is eligible to enter the competition and may obtain an enrollment card by writing to the Fisher Body Craftsman's Guild, General Motors Building, Detroit 2, Michigan.

A booklet on model car design and construction, the only textbook of its kind for youths wishing to learn about automobile design, will be sent to each boy enrolling in the Guild, McLean said. It was prepared by professional designers from the General Motors Styling Section, Fisher Body Division engineers and the Technical Staff of the Craftsman's Guild.

The design manual shows how to sketch a model car, including some of the practical limitations that face the professionals. It also illustrates, step by step, how to build the model either by casting it in plaster or by carving it from wood.

In England the ladies' race in really little cars. Miss M. Store is shown winning the women's event at the auto races at Brands Hatch. Miss Olga Kevelova, well-known motorcycle competitor, was second.



Chilton's MOTOR AGE, NOVEMBER, 1950



Robert J. Bohaty has been in the repair shop business since 1914. He has skillfully restored many old cars, now valued "antiques," and has placed them on exhibition in his own "Horseless Carriage Museum." The picture shows Mr. and Mrs. Bohaty and two of their fine cars—a 1901 Covert and a 1905 Renault.

Ford Parts

Ford Division of Ford Motor Co. is the latest automobile manufacturer to establish a uniform parts wholesaling program among its dealers. Previously, most of the sales of Ford parts to independent repair shops and to other line dealers had been handled by about 500 key Ford parts distributors. Under the new plan all dealers are eligible to participate. It provides for a competitive discount on all parts sold at wholesale. In addition, there is an incentive discount arrangement on fast moving competitive parts, under which the dealer accumulates an incentive figure on parts purchased from the company. The amount of this figure is based on the percentage of these competitive parts sales in relation to parts business.

1951 Mercury Prices

Ford Motor Co. has decided to hold the line, at least for the present, on prices for the 1951 model Mercury cars. The company also announced that its new Mercomatic automatic drive would be priced at \$168.50 which includes the Federal Excise Tax.

Henry Ford II, president, said that costs have risen at the rate of \$78 million a year since the start of the Korean war and that

previously Ford had absorbed costs of a pension plan and wage increases. He indicated that certain factors might make a price increase necessary later on.

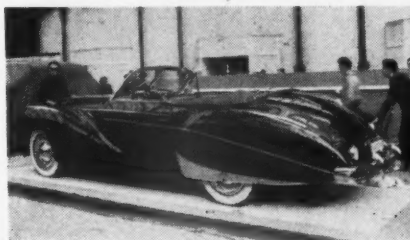
A.A.A.

Lou E. Holland, Kansas City businessman and civic leader, has been re-elected president of the American Automobile Association.

Holland was named to his second one-year term by the more than 800 delegates at the closing session of the A.A.A.'s 48th annual convention. Former president of the Kansas City Chamber of Commerce and of the national Better Business Bureau, Mr. Holland's first year as A.A.A. president was marked by the Association's growth to a membership of 3,000,000.

Also re-elected today was Senior Vice-President J. E. O'Neill, of Fresno, California.

The Porsche, a new German small car was one of the attractions at the Paris show. It has a 4-cylinder engine placed in the rear of the two-seater coupe body.



Guided Missiles

K. T. Keller, president of Chrysler Corporation, has undertaken work of an advisory nature on the armed services guided missiles program. He is taking the assignment at the request of the government. Following the announcement, there has been considerable speculation in Detroit that Mr. Keller would resign as president of Chrysler following his 65th birthday on Nov. 27 to carry on his work for the government. However, in a clarifying statement, a corporation spokesman said that Mr. Keller would not sever his connection with Chrysler Corporation.

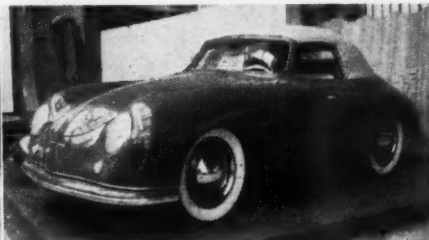
Old Timers

The 11th Anniversary Dinner of the Automobile Old Timers held recently in New York brought out a record crowd. Over 1100 members and guests were in attendance. C. E. Wilson, president of General Motors was the key speaker. Distinguished service citations were awarded to C. S. Mott, Flint, Mich.; C. B. Hayes of Jackson, Mich.; W. C. Stewart of Atlantic City, N. J., and F. E. Moskovics. Membership has reached 3700.



A general view of the Grand Palais in Paris at the opening of the 1950 automobile show. The 37th annual auto show displayed American, French, British, Italian, German, Czechoslovakian and Spanish automobiles. More than a million visitors attended.

Also seen at the show was this 26 hp Delahaye seen on its stand at the same show. The four place cabriolet body shown here is a custom job by Saoutchik.



Service Industry News . . .

Atcheson Retires

President Bernard Lindahl of the Minnesota Automobile Dealers Assn. has announced that the executive board of the Association has reluctantly accepted the resignation of its general manager,



Glenn B. Atcheson, effective December 31st of this year.

Atcheson has been with the Association since early in 1943 when he came from the Reconstruction Finance Corporation, where he had just finished his work as Automobile and Tire Consultant for the agency, which had handled the Scrap Rubber and Idle Tire programs, as well as loaning money on, or purchasing frozen automobiles in dealers' stocks.

A.T.A. Secretaries

Many local, state and regional automotive trade association secretaries, executive secretaries and managers have been invited to attend a "Secretaries Conference of Automotive Wholesaler Associations," on November 30, at Hotel

The Automotive Advertisers Council program committee developed the current highly successful "Care Will Save Your Car" program, presented in this issue on page 55. In the left picture below W. A. Kilpatrick is explaining the presentation to W. T. Ruddell, Central Rubber and

Sherman, Chicago. This date is just prior to conventions of the national associations and the Automotive Service Industries Show.

Nathan M. Roberts, executive secretary of the Automotive Wholesalers Association of Alabama, will act as temporary chairman of the group. At the time of the conference, further meetings will be discussed and the possible formation of an organization effectuated to interchange information between associations.

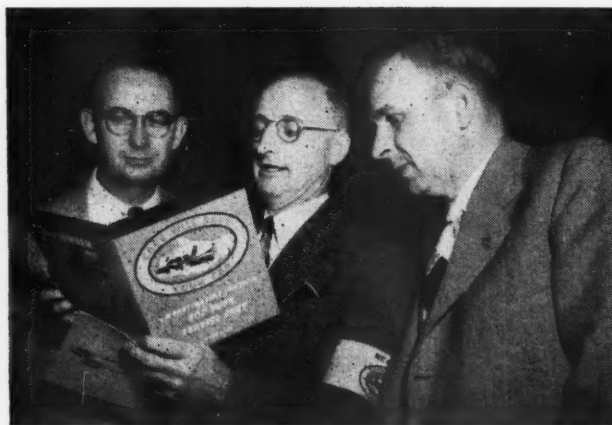
The one-day session will be a round-table type meeting to provide all those in attendance an opportunity to enter into the discussion of each subject.

Pacific Show

Almost 50 per cent of the 521 booth spaces available to exhibitors at the 1951 Pacific Automotive Show has been "sold" in the first six weeks following issuance of invitations to the nation's leading automotive service industry manufacturers, and the tempo of incoming applications is accelerating daily according to A. J. Thompson, Seattle automotive wholesaler and show president.

Booth locations for the big Pacific show, to be held in Seattle's Civic Auditorium next March 21, 22, 23 and 24, will be determined by drawing, Thompson announced. This drawing, he added, will take place some time between the close of the 1950 A.S.I. Show (being held in Chicago Dec. 4-8) and January 10—in no event later than the latter date.

Supply Co., Minneapolis, a Director of M.E.W.A., and Wallace Craig of Craig Motor Service Co., Fairmount, W. Va. At the right are committee members Charles C. Tapscott, Walter A. Kilpatrick, Ira Saks, and Duane Jones, chairman of the committee.



Dodge

Appointment of Louis J. Ouellette to the newly-created post of Director of Dealer Advisory Conference has been announced by E. C. Quinn, general sales manager of the Dodge Division, Chrysler Corporation.

In the new position Ouellette will



use his 33 years of diversified automotive experience in furthering good will and understanding existing between customers, dealers and the factory. A Dodge Dealer's Advisory Conference is now being formed following a conference of 47 representative dealers invited to Detroit by the factory. Ouellette will work closely with the program which results.

V-C Wholesalers

The Virginias-Carolinas Automotive Wholesalers' Association held their annual meeting recently at Greensboro, North Carolina. Pres. Wray Morse presided and S. Wade Marr and J. Howard Reed of M.E.W.A. were featured speakers.

Report to Our Readers

Fortune's Contribution

"If you rule out the Texas Big Rich and a few other financial freaks who have made speculative killings, you will go a long way before finding a class of legitimate businessmen that have made so much money so easily as the automobile dealers of America in recent years."

That, gents is from an article in the November issue of the magazine *Fortune* entitled, "Great Day for the Dealer." And, *Fortune* says: it isn't news that dealers are making fabulous money—but the question remains whether anything should be done about it. *Fortune* maintains that it's about time to reduce the dealers' discount—for the benefit of manufacturers, consumers, and in the long run the dealers themselves. Better get yourself a copy of *Fortune* and let's hear what you have to say about it.

* * * *

To Puncture Inflation

It has been pointed out that our biggest national problem is the control of inflation and it was that which prompted the restoration of Regulation W. However, the subsequent amendment of the regulation only two weeks after the original order has actually meant slowing-down-to-a-stop the business of providing personal transportation for the American voters. And, the American voters are the people our Congress is most interested in. Witness what happened last week.

While the American public must forego the opportunity to buy new and used cars, the scrappage of old, worn-out cars stops. And car dealers will find themselves victims of "poverty in the midst of plenty."

Where Do We Go From Here?

The answer is, friend, to the Congress of the United States for a special hearing before the Senate Banking Committee which will investigate Federal Reserve Board's "sudden death" revision of Regulation W credit controls. As this is written, dealer associations are gathering facts and figures to demonstrate the harshness of the 1/3 down, 15 months to pay credit terms. In the meantime new and used car sales were toppling while new car production for October was one of the biggest months in a record year.

* * * *

Watch Out For "Wash Out"

This is particularly true in this period in the liquidation or "wash out" of 1950 models in advance of 1951 new car introductions. In most lines, dealers have kept the pipelines open to receive this year's record 7 million unit production. New 1950 models are beginning to clog dealers' warehouse facilities and for many dealers across the country, it's touch and go in merchandising the 1950's before the 1951's arrive.

Only hope for earning full price on the remaining 1950 cars on hand may hinge upon higher price tags on the little-changed 1951 models.

* * * *

No Matter What Happens

The automotive service industry is a vital part of our American economy. One spokesman pointed out that we spend \$5 billion a year in service sales to keep America on wheels. (That's more than the combined sales of U. S. Steel, Sears-Roebuck, Montgomery-Ward and Western Electric).

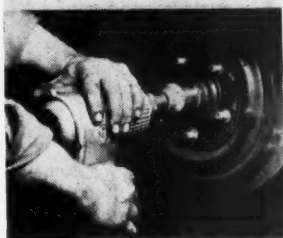
It seems hardly necessary to harken back to the war-time emergencies of the last World War. It might be well to take a look at your shop equipment and tools, and your trained personnel. They are your most valuable assets when used most efficiently. Service profits are limited only by your ability to run volume through your shop. It will pay dividends to plan now to increase your selling effort.

Frank P. Tighe

Editor

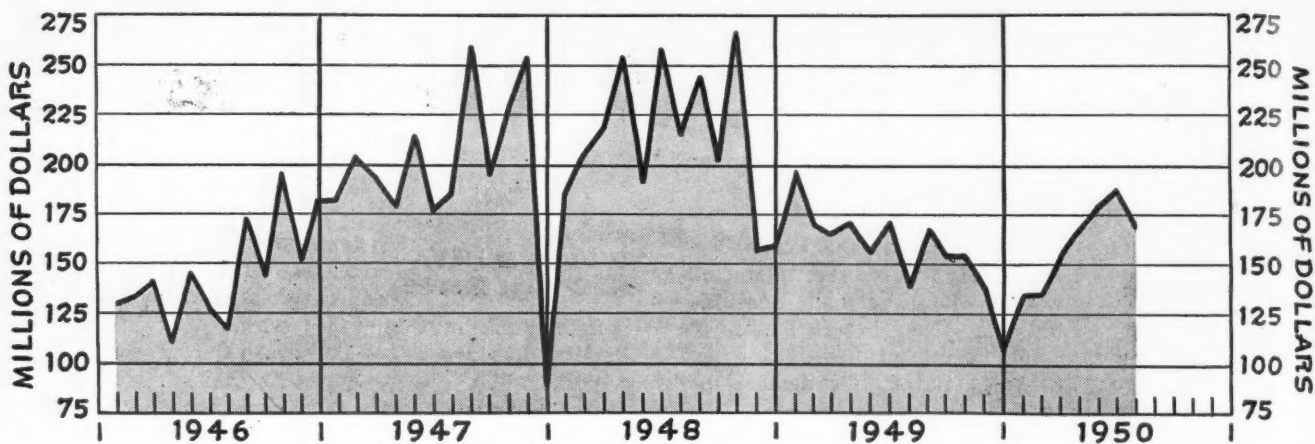
The editors of **MOTOR AGE** are planning a special issue—off press January 10, 1951. It will be a full-scale presentation of new products, new ideas, and new merchandising plans gathered at the Automotive Service Industries Show, Navy Pier, Chicago, Dec. 4-8.

ASI Ideas



..... at work!

BUSINESS GUIDE



Dollar Volume of Replacement Parts and Accessories Sales

The total sales of automotive replacement parts and accessories for the month of July was \$172,-

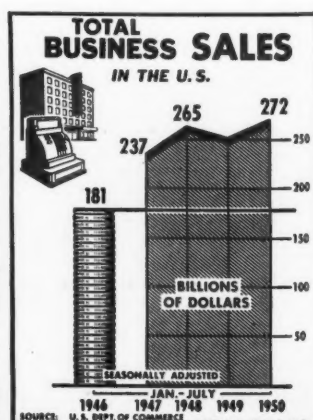
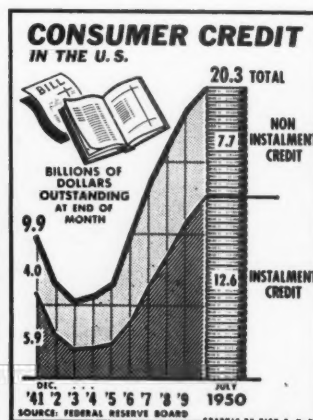
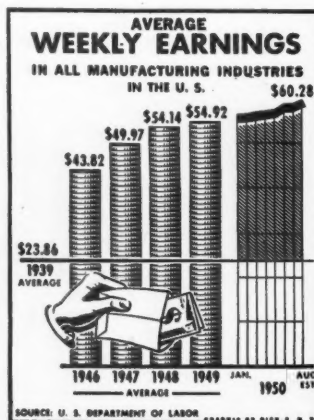
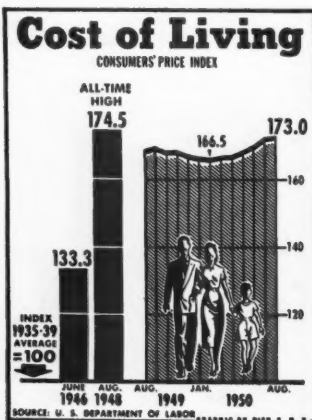
624,700. This put the figure for 1950 approximately \$35 million above 1949. The promise of the first

half of 1950 for a good year is continuing, with the seasonal drop less than expected.

Indicators of Business Activity

These figures are based on latest thirty-day reports

	Latest Data	Month Before	Year Ago	Percentage Change from— Month Ago	Year Ago
PRODUCTION					
Automobiles (Units).....	700,000	818,092	626,180	-14.44	+11.79
Industrial—F. R. B. Index, 1935-1939=100.....	210	198	174	+ 6.06	+20.69
SALES					
Manufactures (\$ millions):					
Durable Goods.....	\$9,975	\$8,670	\$7,387	+15.05	+35.03
Non-Durable Goods.....	\$12,715	\$11,422	\$10,333	+11.32	+23.05
Replacement Tires (Units).....	6,399,461	8,049,181	4,462,731	-20.50	+43.40
Gasoline (millions of gallons).....	3,561	3,570	3,278	- 0.25	+ 8.94
Department Stores—Index, 1935-1939=100.....	331	281	299	+17.79	+10.70
New Cars.....	683,995	609,926	478,556	+12.14	+42.93
GENERAL					
Consumers' Price Index.....	173.0	172.5	168.8	+ 0.29	+ 2.49
Civilian Employment.....	61,226,000	62,367,000	59,411,000	- 1.83	+ 3.05
Unemployment.....	2,341,000	2,500,000	3,351,000	- 6.36	-30.14





Hudson Adds the "Hornet"

A 145 hp engine powers this model, with Hydra-Matic available at additional cost

AS previewed last month in *MOTOR AGE*, the big news in the 1951 Hudson line is the Hornet. The 145 horsepower engine, to be used in the Hornet, is very similar to the regular Hudson six-in-line engine except that it

has a larger bore and longer stroke to give a piston displacement of 308 cu. in., compared with 262 cu. in. in the Super Six, 254 cu. in. in the Super Eight and 232 cu. in. in the Pacemaker Six. An aluminum high compression head is standard equipment giving a compression ratio of 7.2 to 1. However, premium fuel is not required for satisfactory operation if the engine timing is properly set. While the engine is not exactly new, the cylinder block is now giving much greater rigidity and thickness of cylinder wall. The new block will be used in all of the 1951 Hudson six-cylinder engines. So far as service and maintenance are concerned, all of the six-cylinder engines in the Hudson line can be serviced with the same set of tools.

The Hornet series is identical in styling and wheelbase with the Commodore and Super lines.

Hudson will offer Hydra-Matic drive on the Hornet and Commodore Custom series cars as optional equipment with Hudson Supermatic

(Continued on page 152)

Engine Specifications

	Hornet Six	Super Eight	Super Six	Pacemaker Six
Bhp.....	145	128	123	112
Bore.....	3 $\frac{13}{16}$	3	3 $\frac{9}{16}$	3 $\frac{9}{16}$
Stroke.....	4 $\frac{1}{2}$	4 $\frac{1}{2}$	4 $\frac{3}{8}$	3 $\frac{7}{8}$
Disp.....	308	254	262	232
Comp. Ratio....	7.2	6.7 7.2*	6.7 7.2*	6.7 7.2*

* With high compression head.

Studebaker Introduces

The 120 hp powerplant, used on Commanders and Land Cruisers, has overhead valves



Top. The 1951 Studebaker Land Cruiser four door sedan.

Above. The 1951 Studebaker Custom Champion. Front end styling improvements center around the new grille, spinner and bumper support shield.

Right. The Commander Starlight Coupe, showing the general exterior changes on the 1951 Studebaker models.



THE most dramatic aspect of the 1951

Studebaker announcement is the introduction of the V-8 engine in the Commander and Land Cruiser models. Although the body structure remains unchanged, the three basic models — Champion, Commander, and Land Cruiser — have been provided with entirely new box section frames incident to a change in wheelbase. For 1951 both Champion and Commander models are mounted on a 115-in. wheelbase chassis, while the Land Cruiser is 119-in. This compares with 113, 120, and 124-in. wheelbases of last year.

Although bodies remain the same basically, some evident change in exterior appearance has been ef-

V-8 Engine

and a 7 to 1 compression ratio

V-8 Engine Specifications

Type.....	Valve-in-head
Cyl. Arrangement.....	90 deg. Vee
No. Cyl.....	8
Bore (in.).....	3 $\frac{3}{8}$
Stroke (in.).....	3 $\frac{1}{4}$
Displacement (cu. in.).....	232.6
Compression Ratio.....	7 to 1
Bhp (max.).....	120 @ 4000
Torque (max.) lb. ft.....	190 @ 2000
No. Main Bearings.....	5

fectured by the introduction of a new radiator grille treatment. In addition all models feature entirely new bumpers, bumper guards, and tail light treatment.

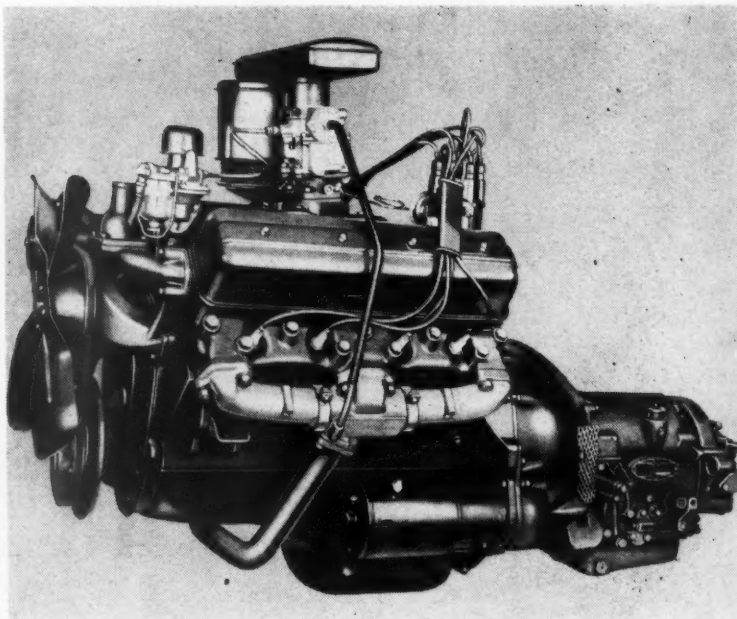
The new overhead valve V-eight engine has a one-piece cylinder block which is heavily ribbed and said to have unusual structural stiffness. The crankshaft, a five-bearing type with four throws and six counterweights, is fitted with a rubber mounted vibration damper. Thrust is taken on the No. 1 main bearing. Main bearings are of interchangeable type, steel-back, with a micro-lining of babbitt alloy. All main bearings are of 2 $\frac{1}{2}$ -in. nominal diameter with clearance

ranging from 0.0006 to 0.0027 in.

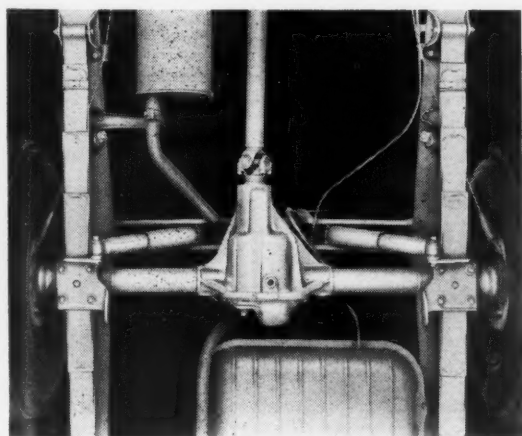
Valve gear is of simple conventional design with a barrel type cast iron tappet. Quietness is achieved through proper design, control of clearances and back-lash in the mechanism, in combination with cams of special form featuring an unusually long ramp. Intake valves are of chrome-nickel steel alloy for the head and stem.

Tappet clearance for both intake and exhaust is .016 in. cold. Angle of seats is 45 deg. The stem end is of double groove type. Intake valves are shrouded to prevent leakage of oil. One of the important features of the valve mechanism is the

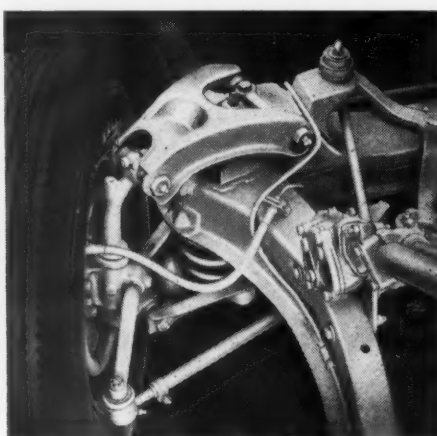
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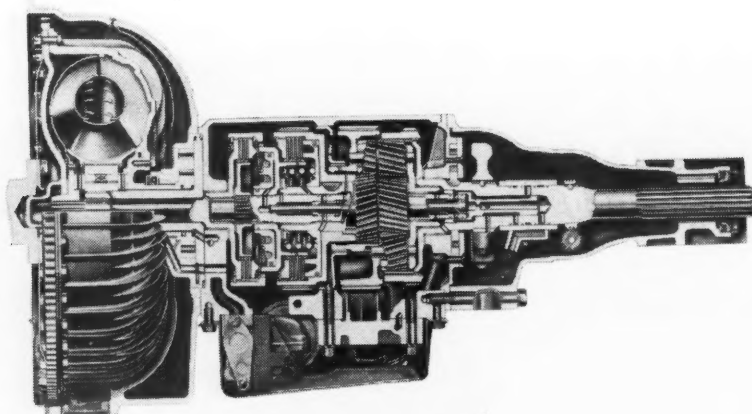
Above. Left hand side view of the Studebaker V-8 engine with accessories.



Far left. Rear suspension on the Champion and Commander from underside showing the new wide springs.



Left. View of the redesigned front suspension system on the Champion and Commander.



Lincoln and Mercury

Announce 1951 Line

Mercury offers a torque-converter type automatic transmission

Lincoln and Cosmopolitan present many styling improvements

MERCURY

LONG-AWAITED word on the availability of the automatic transmission, to be known as Merc-O-Matic, as optional equipment on the 1951 Mercury line is one of the major features of the announcement by the Lincoln-Mercury Division.

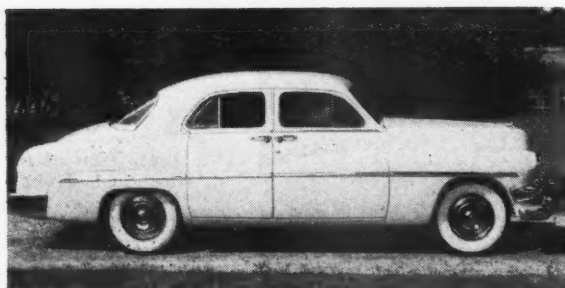
Essentially the same body styles are continued—the coupe, four-door sedan, convertible, station wagon, and Monterey customized coupe model. Considerable basic change has been made in the

body structure by the introduction of new quarter panels, roof panel, and the rear fenders which carry out the side panel profile considerably past the trunk lid line. These changes have involved a considerable outlay for entirely new dies.

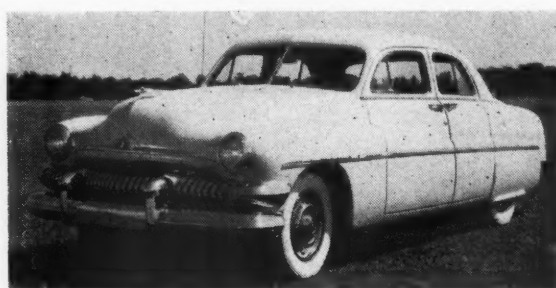
The cars now have the appearance of being much longer than before although actual overall length remains about the same. External appearance is quite distinctive with fresh grille treat-

(Continued on page 82)

The 1951 Mercury Sport Sedan. Notice the restyled rear quarter panels and rear fenders, which give the car a longer appearance.



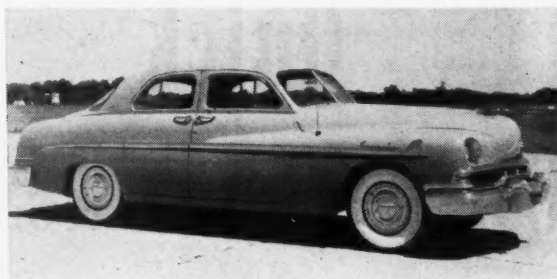
Three-quarter front view of the Mercury sport sedan, showing the new grille design, massive bumper and unusual treatment of the parking lights.



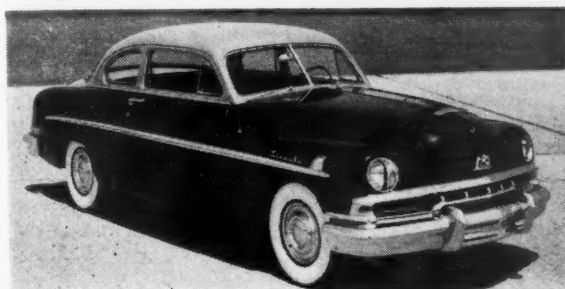
LINCOLN



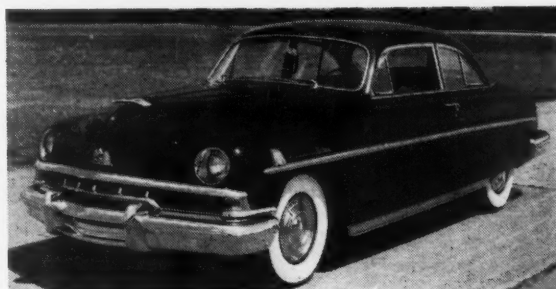
Lincoln Cosmopolitan Sport Sedan. . . .



Lincoln Sport Sedan. . . .



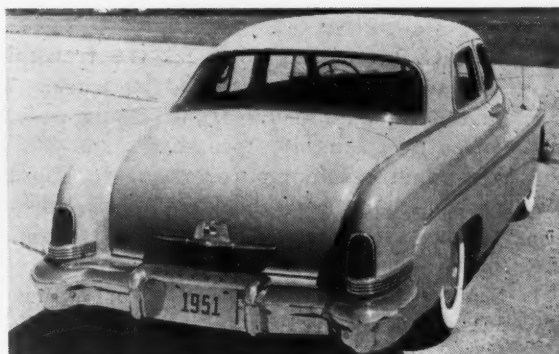
Lincoln 6-Passenger Coupe. . . .



Lincoln Cosmopolitan 6-Passenger Coupe. . . .



Lincoln Cosmopolitan Sport Sedan. . . .



Lincoln Sport Sedan. . . .

BIGGEST news regarding Lincoln models for 1951 is in the major change in eye appeal and external styling, effected by the introduction of new rear fenders and quarter panels, more massive bumpers front and rear, and redesign of the grille. Interior treatment, hardware, and lamps all are fresh and distinctive. Headlamps have been mounted farther apart and have a narrower frame.

Rear fenders extended considerably beyond the profile of the trunk lid terminate in wing tips giving not only a changed appearance but a feeling of greater overall length. With the introduc-

tion of new quarter panels the rear body cross sill has been reinforced to provide for greater structural rigidity.

Cosmopolitan models feature primarily new grille treatment, new bumpers front and rear, and fresh ornamentation and lamp treatment. Interior trim and hardware also have been restyled. As to ornamentation, the former heavy molding on the front fender has been replaced by a streamlined molding running the full length of the car. Fender skirts are standard on the Cosmopolitan, optional on the Lincoln.

(Continued on page 127)

Quick Oil Pressure Tests on Powerglide Transmission

Locating the causes of trouble on Chevrolet's automatic transmission is not difficult with the equipment and methods outlined here

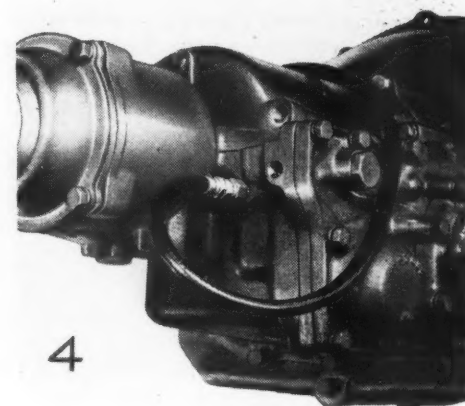
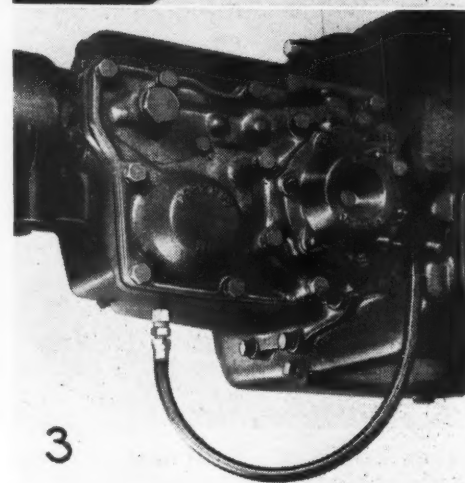
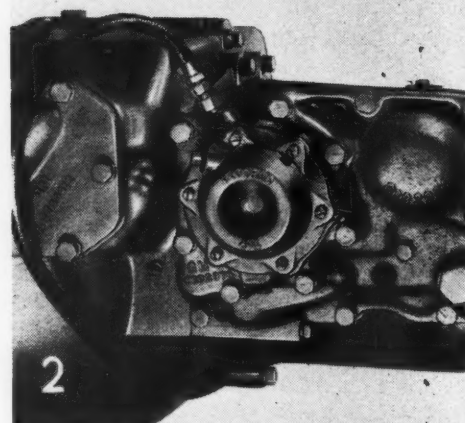
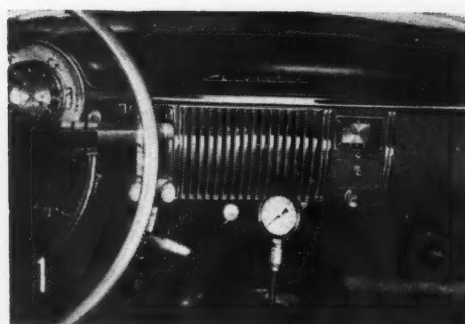
by Jack Montgomery
Technical Editor

BEFORE attempting to check the transmission oil pressure the oil should be warm. There are five points on the transmission which can be checked by means of a pressure gage. They are the front pump, rear pump, reverse servo, clutch and low servo. All of these checking points except the front pump are accessible with the transmission in the car.

1. Remove the floor mat and transmission hole cover. 2. Clean off any dirt around the pressure hole plugs. 3. Connect the pressure gage to the low servo, apply outlet provided on the lower front servo cover. 4. With a tachometer, set the engine to idle at 400-425 rpm and take the idle pressure reading which should be 40 to 45 lbs. with selector lever in "D" range, and 125 to 150 lbs. with selector lever in the "L" range. 5. Apply the brakes to lock the rear wheels and increase the engine to stall speed (1560 to 1610

(Continued on page 78)

- | | |
|---|---|
| 1. Pressure gage mounted on instrument panel. | 2. Pressure gage connected to Low servo apply line. |
| 3. Pressure gage connected to reverse servo apply line. | 4. Pressure gage connected to rear pump. |



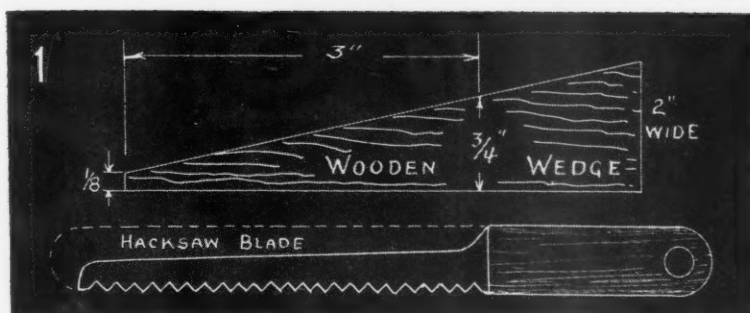
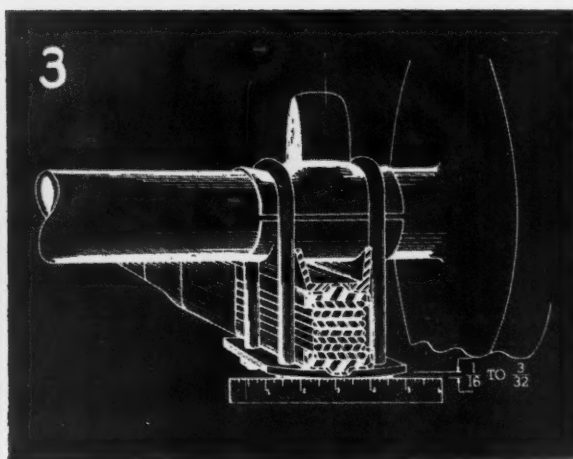
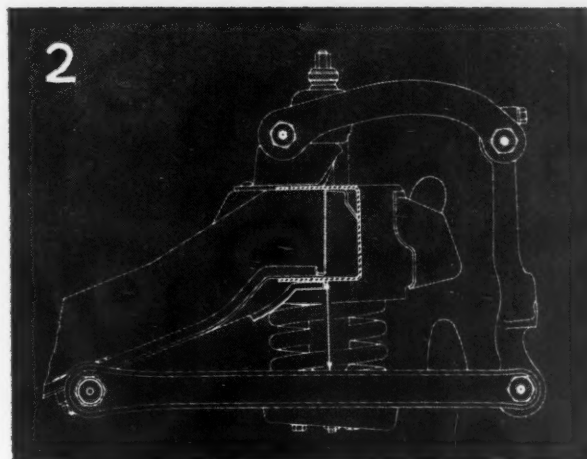


Fig. 1. Tools made for replacing leaf spring liners.

Fig. 2. Typical method of checking for spring sag. Measure from control arm to frame, as shown by the arrow.

Fig. 3. Checking the spring clip plate for bowing.



Spring Suspension Service

Knowing the facts on the servicing and replacement of coil and leaf springs will help a shop to sell the customer and to do the most satisfactory job.

WHAT many car owners need most, when their cars require spring suspension service, is someone to explain to them in a simple, understandable manner why the old-fashioned habit of replacing one leaf at a time is more costly for them in spring suspension miles per dollar. The motorist knows that many parts of car will of course, wear out. But many have yet to realize that springs, as moving parts, have internal friction and so also wear out and should be replaced.

Let's start with coil spring front suspensions. Because sagged coil springs do affect steering alignment, it is usually necessary to shim or replace them for this reason, long before actual breakage occurs. When these coil springs sag beyond the allowable number of shims (usually one and not more than two at the most) recommended by the car manufacturer, authorities generally recommend that these coil springs be

(Continued on page 96)

Tommy Screws Things Up

Tommy sold the job, did the work, hit a snag and checked it over. Larry checked it again in vain. See if you can beat Pop to the punch on this one!

by Charles M. Kenyon, Managing Editor

TOMMY finished wiping off the customer's windshield and walked around to the driver's window. "Just two dollars, Mr. Grayson," he said. "By the way, winter will be here any day now. How about a minor tune-up just to be sure you won't have any trouble on those cold days?"

"As a matter of fact," Mr. Grayson smiled. "You picked just the right time for your sales talk. I had a bit of trouble starting this morning. Could you have the work done by noon if I left the car now? I could get a ride down to the store with Ed Johnson. He'll be driving by in a few minutes."

Tommy drove the 1949 Pontiac into the shop and lifted the hood just as Pop O'Neill came back to speak to him.

"More business, Pop," said Tommy with a grin. "Two bucks worth of gas got us a quick tune-up."

"Music to my ears!" Pop laughed. "When does Mr. Grayson want it?"

"Not until noon," Tommy replied. "But I'm all caught up so I thought I'd get started on it before Larry got back."

"Good idea," Pop agreed. "But I'd like you to go down to Automotive Parts for a pick-up. We need the stuff before their truck will be around."

When Tommy reached the jobber's, he found two or three men ahead of them. They didn't look happy. Jack Harrison, the counter man, was patiently waiting on a dusty-brain who was

sure he could recognize the part if he only saw it. The model number of the car had "just slipped his mind."

"At least he knows he wants a ring and pinion, Jack," quipped one of the waiting mechanics. "You can't have too many of them left to bring out."

"Next time, Mac," another mechanic advised solemnly. "Bring the whole rear in an' get a fit-tin'."

Tommy picked up his order and returned to Pop's as fast as he could. Larry Tait was working busily on the car he had just towed in. So Tommy decided to start again on Mr. Grayson's tune-up. He tested the compression and took vacuum readings, then cleaned the carburetor screens and adjusted the carburetor. He put in new points and condenser and checked with a timing light. He cleaned the fuel filter and the air cleaner and added oil. Then he put in a new set of spark plugs.

Immediately when he started the engine he knew something was wrong. It started to spit

Pop O'Neill





"Next time, Mac," another mechanic advised sarcastically, "bring the whole rear in an' get a fittin'."

and backfire almost before he had put it in gear.

Larry's head came up with the first sputter. "I see you need a few more lessons, junior," he grinned. "I'll be with you in a few minutes."

Tommy shut off the engine, lifted the hood and went for his toolbox. But Larry was as good as his word and came right over to help the apprentice out.

"Sounds like trouble in the distributor to me," he commented as he flipped off the cap. The condenser was tightly in place; the points and rotor were OK; he checked the cap for

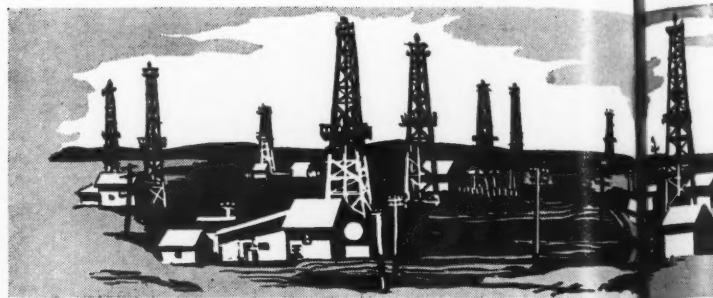
cracks but there were none. Then he ran over the rest of Tommy's work and found nothing wrong. But when he started the engine there was no improvement at all.

"By golly, kid," he grumbled. "When you louse 'em up, you really louse 'em up. Why don't you stick to pumping gas?"

"You've looked at everything I touched," commented Tommy drily. "And even your most ardent admirer, namely you, can't declare that the car now runs smoothly. It is even questionable if any unbiased observer could say that

(Continued on page 86)

As an engine ages, a certain amount of oil consumption is to be expected. Here's the full story on how much and why



How Much Oil Should a Car Use?

by Paul S. Lane

Director of Research
Muskegon Piston Ring Company

A COMMON question which comes up among car owners and mechanics is what is normal oil consumption, or where does the oil go? A wide divergence of opinion is found between the operators and engineers. Such factors as size of engine and vehicle are significant. Load, speed, mechanical condition, terrain, environment, maintenance, and others are all important factors.

Today the owner of a new passenger car can expect to get 600 to 1200 miles per quart for at least the first 15,000 miles. This figure can be expected to fall off as much as 50% at the end of the next 15,000 mile period, depending on how the car is driven and cared for.

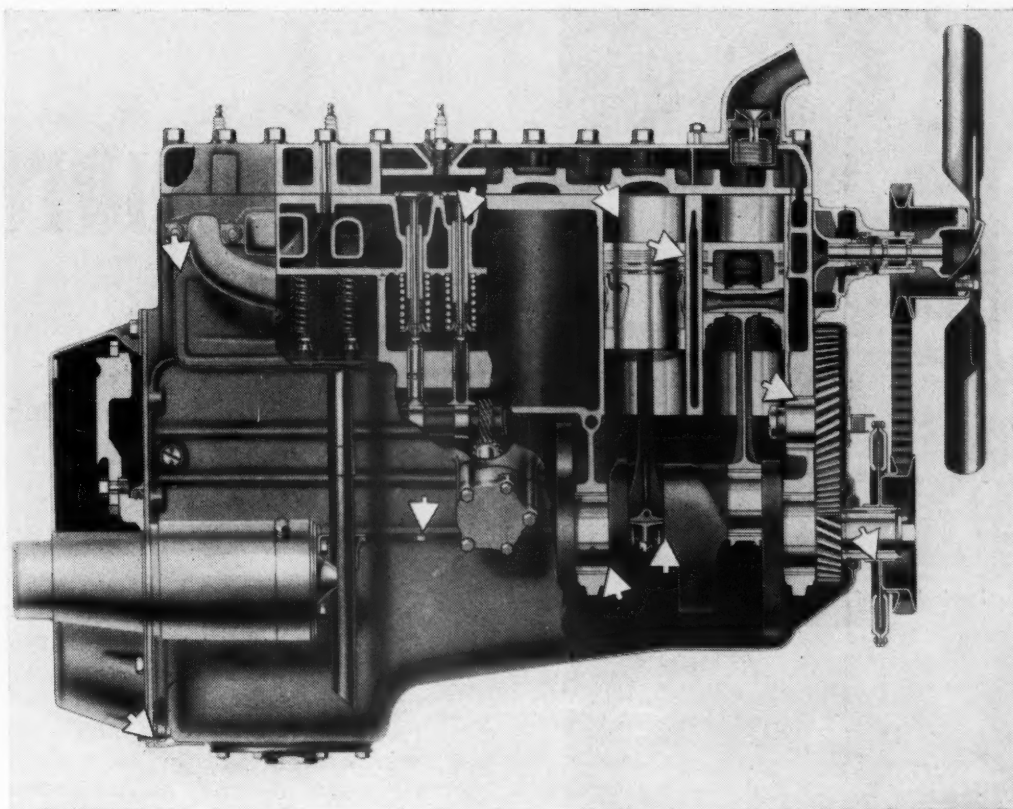
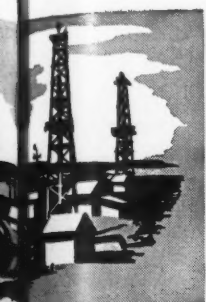
Whether the oil escapes by leakage or burning, it is still considered oil consumption. The black trail on the highways attests to the fact that many cars lose oil by leakage. At high speeds crankcase pressures increase, due to blowby, tending to force oil through main bearing end seals and through the pan gaskets if these are not properly drawn up. Leaks also may occur at the drain plug, timing case cover seal, external oil

lines, and at the valve cover gaskets.

Inside the engine, oil consumption results mainly through burning and it is normally considered the duty of the piston rings to keep this loss to a minimum. In most cases the rings are looked upon as the prime offender, though other engine elements may be guilty.

Excessive oil consumption resulting from burning of the oil within the engine can also come from internal leakage, for example, loose connecting rod and main bearings, loose piston pin bushings, and leakage chargeable to the valve assembly. Normally, however, even with the engine in good mechanical condition, burning of the oil introduced along the cylinder walls results in oil consumption. Probably the greatest single factor in successful control of oil consumption is the cylinder barrel. When it remains a true cylinder little difficulty is experienced, but it becomes a real source of trouble remaining forever a disturbing or destroying factor should it be subject to fixed or variable distortion.

Fixed distortion can be due to stud loading, in-



Above. The arrows indicate the most common points of oil consumption and leakage on an automobile engine.



sufficient deck rigidity or faulty design relation between stud bosses, cylinder bore, and cylinder deck. Variable distortion of the cylinders is caused by the cooling system and combustion chamber design.

The oil supply to the valve chamber must be ample to provide stem and guide lubrication. A mist rather than droplets is desired here. Using synthetic rubber seals on the valve stems and between the valve guides and blocks would prevent leakage at these points.

The pistons should be examined for fit and to see that the ring grooves are carefully machined and square with the axis. Out-of-square grooves can make any piston rings misbehave. Ovality and skirt taper are important as well as good thermal conductivity, strong ring lands which do not distort under high-speed operation, and ample drainage area through the oil ring grooves.

For a given vehicle, oil consumption increases rapidly with increase in speed. The number of round trips of the piston and rings are the same per mile, whether at 25 or 75 miles per hour.

However at the higher speeds, heat is piled up into the pistons and cylinders. Oil gets hotter, thinning out and getting past the rings more readily. Also the vital cooling job of the oil must be performed by the cylinder bores, with less time for the oil to drain through the oil rings to the crankcase. As the crankcase temperatures rise, oils are vaporized with resultant higher losses. At certain speeds, different in different engines, the rings lose some of their ability to follow unstable contours. Result—further loss of oil accompanied by higher blowby with its disastrous abuse to the entire engine.

Lubricating oils of higher viscosity gives some-

(Continued on page 126)



Final grinding of the area where metal work has been done.



Using wet sandpaper and water to sand the entire panel to be painted.

Applying primer-surfacer to the entire area to be painted.



Guarantee

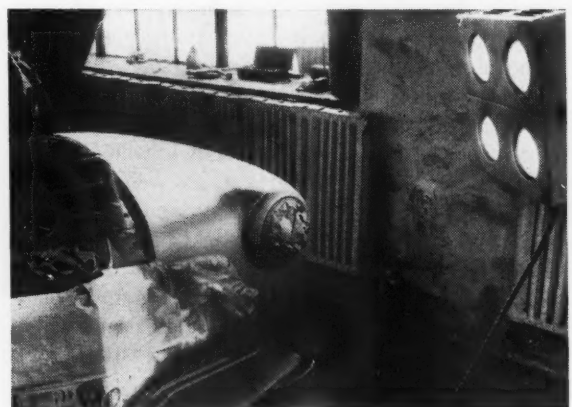
Short cuts in painting may result in

PREPARATION in painting is instrumental in making the completed job good or inferior. No matter how fine the quality of the paint may be, if the preparation and undercoat is inferior the result will be inferior. Seldom can a poor paint job be traced back to defective paint. Paint manufacturers make sure that their products will adhere, but they cannot produce paint which will adhere to everything. The surface must be clean!

Whether the job is a complete refinish or merely one fender, as illustrated here, the procedure outlined in this article holds true.

After the metal work has been done, clean the entire fender with an approved solvent to remove all traces of grease, wax, or other foreign material. Then go over the area with coarse sandpaper to remove any rough spots that may have developed from rust, and to smooth any spots where the old finish is broken or cracked. Re-

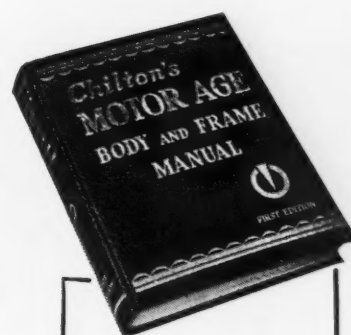
A battery of infra-red lamps being used to dry the primer surfacer.



a Good Paint Job

by Arthur H. Nellen, Jr., Service Editor,

long cuts in profits. Take time to do the job right



Other helpful information of this type is available in Chilton's Motor Age Body and Frame Manual

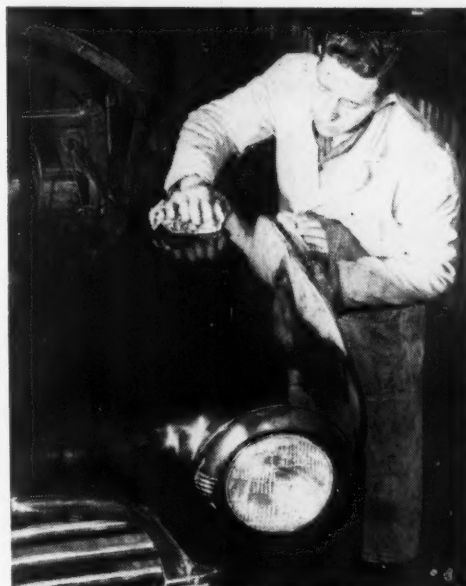
member that sanding will not remove wax, but instead will grind it into the old finish. So be sure that all wax is removed first. Next use fine wet sandpaper and water over the entire area to be finished. In some cases it may be necessary to sand down to the bare metal, although most paint jobs will be satisfactory without this much work, if the surface has been prepared properly.

After sanding, wash off the panel with water and allow it to dry. Rust is one of the worst enemies of paint, and if it is not completely removed, it will cause the paint to blister or peel. Even after all visible rust has been removed from the bare metal, there is still the microscopic rust which should be removed with metal conditioner.

Take time to do a good job of masking. If the tape overlaps bare metal or old paint, the unfinished spot will stick out like a sore thumb and the only suitable remedy will be preparing and re-

(Continued on page 90)

Illustrations courtesy of E. I. DuPont de Nemours & Co., Inc.

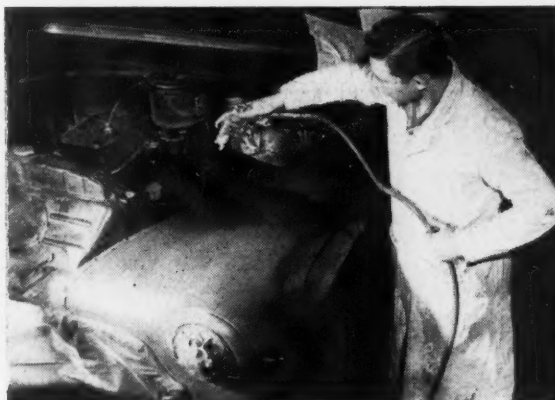


Rubbing down the finished lacquer job with compound.

Wet sanding the primer-surfacer before applying color coats.



Application of the final color coat over the entire surface.





Automotive Advertisers Council Shows

How to Win Sales and

**"Care Will Save Your Car" Advertising Plan
Is a Continuing Service to the Automotive
Retailer and Will Help Promote Business
for Your Shop. Second of a Series.**

Shown on these pages are twenty Bulletin "Special" Messages, printed in three colors, size 20 3/4 x 28 in. These are available as part of the "Care Will Save Your Car" year 'round advertising plan for automotive retailers.

By Frank P. Tighe
Editor

LAST month we invited you to read about an "Opportunity" to participate in an advertising plan to promote business for all automotive repair and service establishments. It was the initial presentation of the "Care Will Save Your Car" year-'round, industry-wide advertising and sales promotion campaign designed for you by the Automotive Advertisers Council.

This second report on the campaign is to give you more details and to point out that there's a post-card on page 65 which, if you'll sign and mail it to us, will





Influence Customers

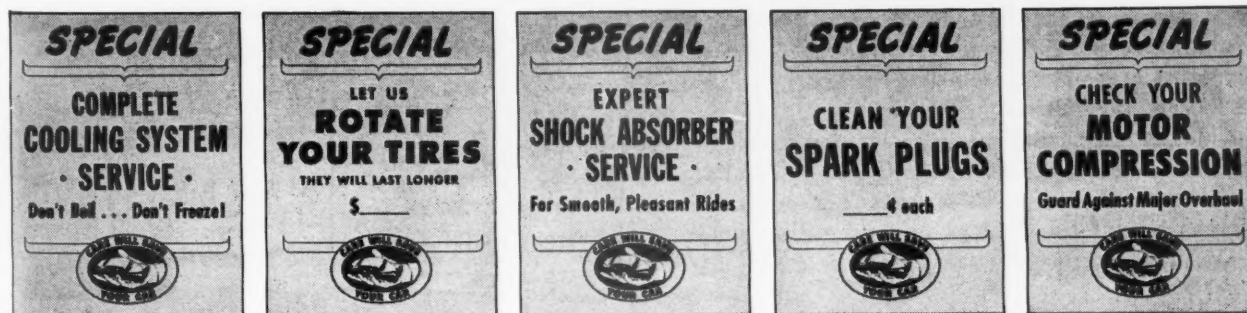
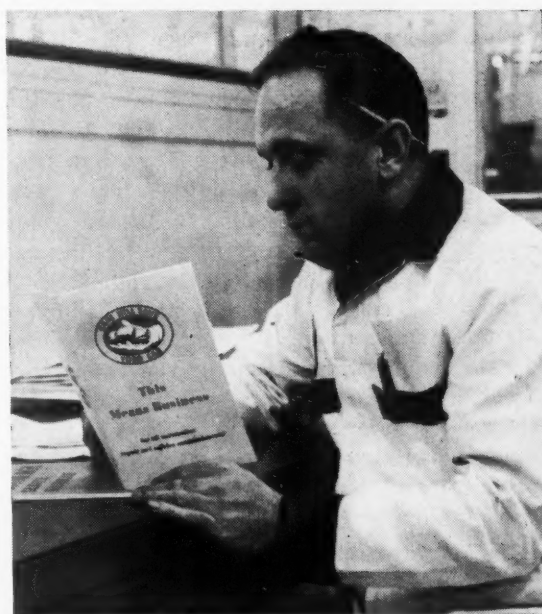


bring you complete information on the entire program.

Examine these twenty posters carefully. They're SPECIALS. Signs that you can use, seasonally and as a means of attracting a lot of good, profitable business by offering your service customers a "deal."

This doesn't mean something "for free." It's "for profit" that we're talking about. Twenty sturdy advertising signs, each 20¾ by 28 inches that can be displayed, setting your own prices, using exactly the ones that fit your needs, by the week or by the season. They are printed in three-colors and on both sides, so that you can use one side, then switch to the other at the opportune time.

(Continued on next page)



How to Win Sales . . .

Here's more of the sales promotion help that is outlined in the "Care Will Save Your Car" advertising plan. These include radio spot announcements especially written for your local radio station as well as a campaign of six newspaper ads, supplied in mat form, ready for your local newspaper.

The complete detailed story of the Care Will Save Your Car plan is written in a fully illustrated booklet entitled "This Means Business." It describes the volume of service business available. It tells you why you should share in the market. Then, it tells you how to go about getting your share. It describes and illustrates the three-color, 10 inch symbol, available as a decal for your shop window. It shows you the five display posters, 10½ by 36½ inches in three colors. (Featured in October, Motor Age).

It illustrates the six-piece direct-mail advertising program which has been carefully designed and written to invite customers and prospects to your shop. They can be imprinted with your firm name, address and telephone number. If you do not have a mailing list of your own, a complete mailing service is available. This service includes a list of vehicle owners by make and year in your selling area. The list is submitted to you for your selection. Then the cards are imprinted, addressed, stamped and mailed.

Another important part of the campaign is a set of six "Care Will Save Your Car" advertisements delivered to you in mat form and ready to turn over to your local newspaper. The program also includes a set of thirteen radio spot announcements which can be used effectively on your local radio station program.

The entire campaign has been designed by the Automotive Advertisers Council—a non-profit organization. The Council has a membership of top-flight advertising men who work for a living as advertising executives for manufacturers of automotive parts, accessories, chemicals, supplies, tools and equipment. They are the advertising brains of this business. And, this particular package of advertising is designed as though it was your own particular advertising campaign. The cost is nominal. And it can be purchased in parts—the direct-mail campaign, the posters or any of the other segments.



RADIO SPOTS

You can successfully promote your business by using spot announcements and commercials over your local radio station. Radio advertising is one of the best ways to establish your firm name, your location and the essential service jobs which can be performed in your shop.

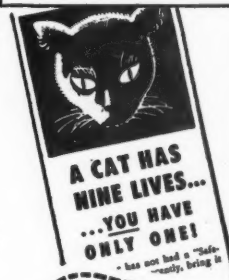
Radio advertising is especially effective where the cost of radio time is low or for large shops that do a city-wide business. Each announcement features the basic campaign slogan "Care Will Save Your Car."



GOOD OLD FASHIONED Service

Nothing fancy—no extra tolls—just good, old-fashioned service when you bring your car to our shop. No high-pressure salesmanship, just a high-quality job and model car. If you have an old car, we offer our service as the kind of a job you want. Our parts are installed only if they are needed for safe and dependable driving.

CARE WILL SAVE YOUR CAR



A CAT HAS NINE LIVES... YOU HAVE ONLY ONE!

— has not had a "Tune-up" yet. Bring it in.



Baby It's COLD Outside

Our "winter mix" means anti-frost, in your radiator, all connections checked for leaks, battery, ignition and fuel line test and muffler inspection... all for safe, more winter waiting and driving.

TIME for WINTER TONIC



QUIT STALLING

(YOUR CAR THAT IS!)

HOW ABOUT A TUNE-UP?

If your car stalls, sputters, quits, lights, splutters or doesn't "go" with a few turns of the wheel, the engine is "stalling". Tune-up will get it on its feet and keep it there. For EXPERT service and parts, accessories and more for your car, tuned on.

CARE WILL SAVE YOUR CAR

SERVICE SHOP NAME
ADDRESS AND
TELEPHONE NUMBER



SERVICE SHOP NAME
ADDRESS AND
TELEPHONE NUMBER



BABY IT'S HOT OUTSIDE!

TIME FOR A SUMMER TONIC

So hotting hot weather your car takes an awful beating. If it hasn't been properly prepared for summer drive, it's bound to "heat" on keep your car "healthy" in our summer check. The cooling system, spark plugs, ignition, muffler, lights, brakes, has belt and tires.

For EXPERT service and nationally known parts, accessories and supplies for your car, see us TODAY.

CARE WILL SAVE YOUR CAR

SERVICE SHOP NAME
ADDRESS AND
TELEPHONE NUMBER



KEEP YOUR CAR A PLEASURE CAR

— NOT A TROUBLE WAGON

An ounce of prevention... a much less... and you can keep your car a pleasure car... more so give you mile for check-up will catch trouble before they become major from both on in for our thorough, continuous inspection.

For EXPERT service and nationally known parts, accessories and supplies for your car, see us TODAY.

CARE WILL SAVE YOUR CAR

SERVICE SHOP NAME
ADDRESS AND
TELEPHONE NUMBER

CLEARING HOUSE

FOR SERVICEMEN'S QUERIES



TROUBLE SHOOTING WITH JACK MONTGOMERY, Technical Editor

- No Kick-Down in Ford Overdrive
- Making a Better Racer From Stock Car
- Compression Leak in Chevrolet
- Confusion in Color-Coded Brake Springs
- Pistons Freeze After Reboring
- Fords Using Too Much Gas
- Adjusting Buick Hydraulic Valve Lifters

Ford Overdrive Does Not Kick Down

I am having trouble with a 1949 Ford Overdrive. I can't get it to kick down when I want to pass a car. This overdrive works perfectly in every way except the kick-down for passing cars. Here is what I have done. When the car came in the garage the overdrive did not work at all, so I replaced the solenoid switch on overdrive and also the little switch right back of the solenoid switch. Then it started to work okay, with the exception of kicking down when you pass. So then I put the kick-down switch on new but that didn't help me any. I checked all the wires and connections and resoldered them, but that didn't help. The last time I test drove it I reached up and turned the switch key off for just a second and it worked perfectly. At present that is the way the owner is using it. Could that fuse block or the dash have anything to do with it? I have replaced everything else except the governor. Garricks Garage, Medicine Lake, Montana.

MAKING the following tests should determine the trouble you are experiencing with the overdrive on this car.

Start engine and let it idle. Ground the kick-down switch terminal at the black cable and the engine should quit. If engine continues to operate, check the black wire between the kickdown switch

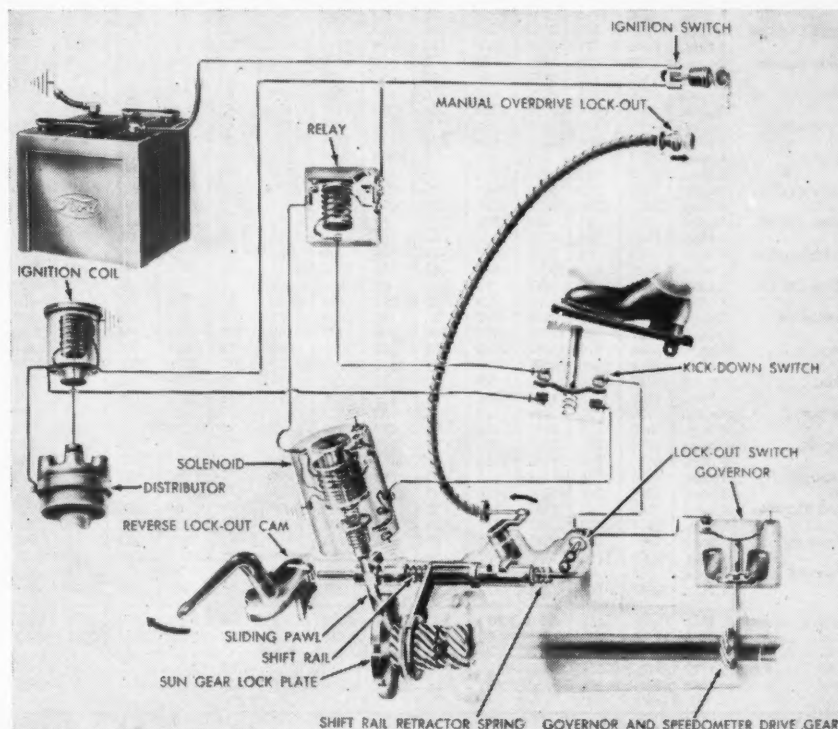
and ignition coil for an open circuit. Next, ground the kick-down switch terminal at the other wire and depress the accelerator pedal to the floor. The engine should stop. If it doesn't, readjust the kick-down switch. If still no kick-down, ground the overdrive solenoid terminal and depress accelerator to floor. Engine should stop. If it doesn't, check for open circuit in the wire between the solenoid and kick-down switch.

Remove the fuse and clean the contact in the fuse block.

Making a Stock Car Into a Better Racer

I have a stock car which I am now running strictly stock. I have a 100 hp Mercury engine. I run on one-fifth mile tracks most of the time, and I'd like to know what gear ratio would be best in the rear. I would also like to know what I can do to the engine to make it run faster without using too many race parts. If you know of anything to make the car stick to
(Continued on page 106)

Ford Overdrive Wiring Arrangement



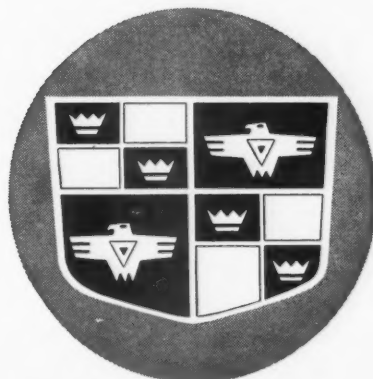
New Car Registrations by Makes by States*

STATE AND MONTH	Bulck	Cadillac	Chevrolet	Chrysler	Crosley	De Soto	Dodge	Ford	Frazer	Hudson	Kaiser	Lincoln	Mercury	Nash	Oldsmobile	Packard	Plymouth	Pontiac	Studebaker	Willys	All Others	Total
Alabama..... August	480	83	2026	148	7	88	382	1433	6	83	101	41	336	121	366	17	764	422	294	56	4	7,250
8 Mos. August	4367	500	14135	758	62	517	1908	12250	91	740	402	338	3353	1265	2533	374	3509	3162	2478	24	20	53,082
Arizona..... August	356	42	689	97	3	62	209	582	4	65	41	33	112	71	184	244	210	168	12	7	3,109	
8 Mos. August	1832	249	4537	380	19	219	679	3311	25	532	159	85	788	468	999	164	1072	1076	1223	110	38	18,041
Arkansas..... August	319	53	808	90	4	69	208	646	7	49	70	16	135	92	161	30	376	195	135	34	.....	3,496
8 Mos. August	2378	304	7023	456	57	409	1373	6560	142	469	469	136	1353	821	1378	299	2450	1999	1292	341	21	25,730
California..... August	5323	1890	12898	3018	43	2000	3964	9682	97	1913	1183	388	3004	2288	3743	418	8288	3748	3684	357	589	68,298
8 Mos. August	28682	6047	73326	8235	263	6013	11458	57281	508	9472	2800	2087	17645	11386	20055	3270	19874	22448	21393	1269	2084	325,388
Colorado..... August	626	101	1247	236	20	130	412	934	11	169	79	83	312	224	293	37	609	407	138	44	1	8,063
8 Mos. August	3832	522	8001	999	104	585	1854	7002	82	1893	305	312	2231	1965	2180	479	2747	2684	1550	261	8	39,886
Connecticut..... August	721	198	1778	273	7	207	601	1185	3	147	196	39	390	185	563	22	905	549	340	68	90	8,466
8 Mos. August	5162	1168	12373	3352	78	903	2572	8984	132	1260	682	326	3204	1709	3373	870	3976	4245	2749	496	379	58,371
Delaware..... August	152	32	490	38	5	34	127	341	2	22	34	8	58	23	128	17	140	171	111	14	7	1,984
8 Mos. August	985	191	2756	158	14	142	491	2176	27	180	167	59	554	220	845	135	644	1107	837	65	25	11,788
Dist. of Col. August	245	77	689	96	.....	96	248	533	4	89	31	33	125	87	241	45	610	236	79	29	36	3,609
8 Mos. August	1623	410	4895	488	5	308	938	3758	21	556	85	179	1175	518	1581	321	1965	1894	716	73	139	21,236
Florida..... August	1085	209	2715	330	80	184	789	1906	16	207	185	108	865	204	546	65	1132	739	388	185	159	11,837
8 Mos. August	6868	1334	16572	1677	463	898	3415	14410	105	1729	521	764	5842	2043	4090	919	5976	5185	3311	943	642	78,607
Georgia..... August	999	176	3374	256	9	166	589	1944	6	127	159	84	557	150	828	34	1323	805	380	65	19	11,830
8 Mos. August	7520	1016	20484	1271	97	878	3374	16791	129	1329	657	629	5177	1386	4421	673	5876	5916	3250	441	125	81,210
Idaho..... August	315	50	633	101	3	70	146	442	7	80	55	25	120	107	182	27	313	263	222	40	3	3,184
8 Mos. August	1738	226	3926	367	6	288	590	2913	43	553	173	116	821	764	1039	207	1182	1247	1280	210	57	17,694
Illinois..... August	4037	972	8885	1541	53	1178	3264	7319	145	1922	1333	264	2235	1793	2734	509	5967	3217	1635	219	49	49,271
8 Mos. August	23590	4266	55213	5432	191	4103	10974	46171	957	10533	3860	1485	13740	9762	16427	3776	20124	18350	11988	941	146	262,023
Indiana..... August	1649	297	4994	543	26	468	1491	3588	31	607	479	116	691	819	1194	115	2368	1680	2002	153	25	23,338
8 Mos. August	9068	1380	26141	2178	124	1734	4566	21031	358	3387	1788	559	4357	4935	6468	1385	7964	8128	10515	696	66	116,798
Iowa..... August	884	193	2808	336	5	213	793	2484	10	230	301	43	551	320	633	32	1244	811	374	28	3	12,296
8 Mos. August	6427	950	20468	1809	39	1209	4024	18637	277	1838	1544	382	4415	2945	4719	790	6395	5788	3276	236	18	88,168
Kansas..... August	833	143	2247	299	14	200	668	1758	38	240	209	55	507	451	487	98	1019	672	335	46	3	10,322
8 Mos. August	4689	606	13622	1096	66	808	2437	11914	218	1500	761	305	3096	2274	2983	798	3917	4190	2423	181	10	57,894
Kentucky..... August	609	121	1994	244	12	184	481	1723	9	118	149	22	237	168	439	16	929	529	274	74	4	8,316
8 Mos. August	4136	519	14001	1054	44	688	2144	11696	109	999	862	159	1689	1497	3071	517	3991	3582	2443	438	15	53,334
Louisiana..... August	536	138	2126	183	12	184	446	1578	7	94	149	34	303	67	416	18	946	483	348	50	7	8,127
8 Mos. August	4579	727	13436	888	103	770	2185	12716	117	843	670	238	2943	993	2905	462	3714	3720	3470	339	41	55,799
Maine..... August	197	43	455	54	5	44	134	312	5	66	45	12	70	61	128	9	238	146	75	26	3	2,118
8 Mos. August	1588	304	4694	444	40	335	946	3437	94	601	384	108	944	616	1197	226	1644	1683	959	216	45	20,485
Maryland..... August	719	139	2065	286	7	184	582	1694	13	260	174	51	354	196	551	92	1130	629	308	79	22	9,535
8 Mos. August	4608	695	15415	1294	43	915	2564	12100	110	1462	639	383	3651	1642	3560	892	4733	4183	2650	287	102	61,928
Massachusetts..... August	1303	352	2536	483	23	475	1171	2649	10	277	235	68	629	396	1272	59	2102	1080	674	121	107	16,002
8 Mos. August	9330	1881	21382	2615	168	2211	5308	19304	208	2977	1248	605	5397	3988	9750	1191	9003	8714	6223	798	469	111,770
Michigan..... August	3576	972	13336	1049	18	821	2832	9122	41	979	1559	215	1922	705	2684	76	4278	3725	1037	163	38	49,128
8 Mos. August	23975	4992	70237	4838	125	3976	10654	63787	767	7014	4591	1533	14426	6266	16829	1909	18513	22748	8631	753	132	286,688
Minnesota..... August	1210	197	3035	466	3	288	898	2453	58	279	452	56	518	355	720	81	1611	999	622	61	16	14,378
8 Mos. August	6784	1034	22634	2274	33	1568	4235	19820	553	3116	2293	408	4490	3784	5806	1600	7484	7021	5635	291	126	102,796
Mississippi..... August	430	94	1275	112	10	80	242	892	2	29	58	25	202	47	185	13	588	308	173	30	1	4,796
8 Mos. August	3340	424	8762	600	45	403	1199	7777	44	350	276	167	1610	654	1629	226	2674	2308	1555	179	11	34,132
Missouri..... August	1100	177	3821	389	14	346	914	2761	33	202	250	64	817	673	721	187	1785	964	493	88	9	15,806
8 Mos. August	7423	1123	25959	1704	62	1452	356	20924	199	1483	864	469	5895	3910	6071	1118	7272	6301	3850	461	38	98,838
Montana..... August	250	67	846	115	3	77	166	617	6	88	55	28	155	79	192	33	317	228	161	49	1	3,530
8 Mos. August	1682	290	5270	457	11	319	834	3942	49	785	206	138	1019	600	1358	247	1590	1329	1289	192	16	21,601
Nebraska..... August	496	111	1478	190	2	109	330	1320	7	88	125	35	282	129	311	34	701	437	205	27	4	6,421
8 Mos. August	3916	557	10654	1096	15	559	1794	9789	82	718	444	248	2257	1024	2318	476	3316	3385	1961	147	14	44,768
Nevada..... August	82	33	111	34	.....	27	38	140	.....	28	10	6	34	11	30	3	74	43	45	6	.....	763
8 Mos. August	448	159	1189	158	2	101	146	744	.....	158	22	65	291	157	267	99	335	258	341	60	1	4,971
New Hampshire..... August	145	34	420	38	8	36	139	310	3	49	28	8	71	48	123	11	195	143	66	24	25	1,913
8 Mos. August	1010	161	3011	258	20	179	639	2414	41	398	193	78	559	510	768	169	927	1074	532	160	73	13,168
New Jersey..... August	1755	452	3875	707	25	490	1593	3158	19	529	502	128	935	463	1385	108	1938	1687	705	229	135	20,795
8 Mos. August	12034	2297	27224	3270	119	2172	6363	21478	325	3893	1932	788	8634	3888	9043	2111	9020	11625	6821	1184	609	134,100
New Mexico..... August	248	43	472	83	11	49	132	354	3	32	38	18	148	77	111	24	200	174	134	42	4	2,397
8 Mos. August	1722	177	3272	329	59	180	547	2880	34	353	135	105	1180	429	726	191	968	1027	1061	181	34	15,340
New York..... August	4823	1503	10048	1845	65	1899	4426	8036	102	1307	1282	297	2322	1458	3733	204	5802	3896	1696	447	813	55,993
8 Mos. August	33892	7711	72716	8967	471	8059	19863	59992	1153	9953	5366	2110	18386	11445	27359	6392	26731	29551	15346	2970	2919</	

(Advertisement)



The
whole automobile world
is watching Studebaker
more intently today than ever before...
and new 1951 models
of outstanding quality and distinction
will add new luster
to Studebaker's brilliant record
of accomplishment



Shop Kinks



\$25

**FOR THE BEST KINK
PUBLISHED
EACH MONTH**

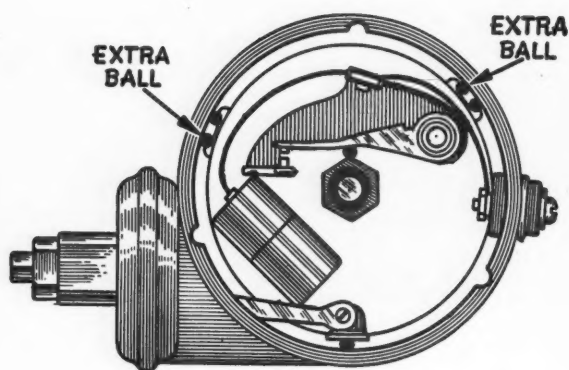
\$5

**FOR ALL KINKS
PUBLISHED
EACH MONTH**

If you've come upon an original idea for making a job easier, a special tool, short cut on a job or any trick of value to other readers, write it down and, if necessary, make a rough sketch. Just make it clear. Send it to Motor Age. If we can use your Kink it may bring five, possibly 25 dollars.

Best Kink of the Month

Distributor Repair on G.M. Cars



To repair Oldsmobile, Pontiac and Buick distributors on which the housing and advance plate are pitted from the three ball bearings, remove the vacuum advance, insulating block, points, condenser and the advance plate. Open the small ears on the stationary lugs enough to make room to insert two ball bearings instead of one, as shown. Then reassemble the distributor and clean and reset the points. Install the distributor on the engine and reset the timing. A check on the dwell meter will convince you that it does a very satisfactory job. *Robt. Kornowski, Cliff Wall Motor Sales, Green Bay, Wis.*

Water Can Be Siphoned Off When the Head is Removed

Here's a tip which comes in handy when replacing head gaskets. Many times the block is full of water right up to the head gasket (some cars don't have an easily accessible block drain) to prevent the water from running into the manifold and cylinders, especially when car is jacked up, I simply insert a

small length of windshield wiper hose into the water jacket, and siphon the excess water into the drain pan. *Bob Berg, c/o Berg Motor Company, Faribault, Minn.*

Wing Nut on Grease Cup Aids in Turning

For greasing the distributor and water pumps on many cars, grease cups of the screw-on type

are used. Although these may be filled with grease it is sometimes impossible to screw them down without pliers, due to mashed or bad threads. This may be remedied by brazing a large wing nut to the cap. Then if you are in need of grease when no tools are available, the cap may be easily be turned down with the fingers. *Marion L. Rhodes, Knightstown, Indiana.*

(Continued on page 60)

*Perfect Circle's
Sensational New*

2 in 1 chrome piston ring set!

NEW CHROME OIL STOPPER

Optional HiPressure
spring packed with every
Chrome Oil Stopper, for
use in badly worn engines
—at no extra cost!

TOP COMPRESSION RING

PLATED WITH SOLID CHROME

Double the Life of Cylinders and Rings!

It's here! The amazing new 2 in 1 Chrome Piston Ring Set

Actually two sets in one because two springs, Normal Pressure and HiPressure, are packed with each Chrome Oil Stopper . . . two sets in one because solid chrome plating on the top compression ring and the steel rails of the oil ring assures twice the life of ordinary sets!

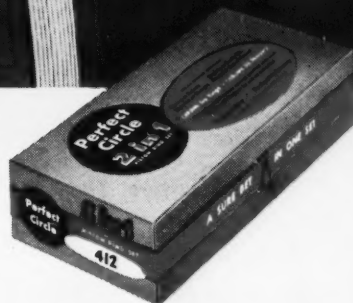
At last, optional spring pressures plus the acknowledged superior bearing and wear characteristics of chrome

give dealers and mechanics the piston ring set they have been waiting for!

Thousands of field installations—in all kinds of cylinders—for all types of service have established entirely new standards of operating economy and life for rings, pistons and cylinders.

Never before in piston ring history has such improved performance been available to consumers with so little difference in cost. Truly, it is

A Sure Bet in ONE Set



Perfect Circle

*The Most Honored Name
in Piston Rings*

Stopping Brake Shoe

Noise on Chevrolet

To stop that rattle and brake shoe squeak on front brakes of 1949 Chevrolets I use the hole in the brake shoe for a guide and drill a $\frac{1}{4}$ in. hole through the backing plate. Then I install the regular Bendix pin, washer, spring and washer, used to hold their shoe against the backing plate. *Paul Miller, Chicago 1, Illinois.*

Easy Way to Install

Hudson Camshaft Gear

An easy way to relocate the camshaft on Hudson cars is to insert three 2 in. studs, making it easy to locate the offset hole. Then slide the gear on these. In this way one can rotate the cam and yet have the gear aligned to the cam, making it easier to align the timing marker. Remove one stud at a time replacing the cap screws. *William Kloeysen, Palmyra, New York.*

Entering Studebaker Trunks

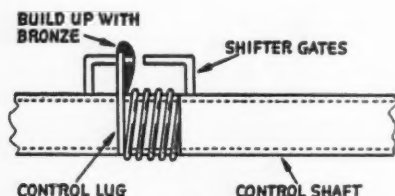
When Key is Lost

On all Studebaker cars from 1947 up, when the trunk lock breaks, we open them by drilling a $\frac{7}{16}$ in. hole directly under the lock on the edge of the channel and in the center of the lock latch where it fastens on the channel. The lock can then be opened with a cotter key puller very easily. *Joseph D. Rowse, Penn Garage, Inc., 21 W. Pine Street, Mahanoy City, Pa.*

Modification On Shift

Mechanism Prevents Sticking

Here's a shop kink showing how to eliminate gear shift sticking on



1949 and 1950 Chevrolet cars. Remove the gear shift lower control shaft. Build up the short lever or

lug which engages one of the levers in the shifter housing (at the lower end of the steering column) about $\frac{3}{16}$ in. with bronze. This eliminates the lug from slipping past the shifter gate and locking. *George Matrone, Roy Stauffer, Chevrolet Sales and Service, Scranton, Pa.*

Removing Quarter

Panel Dents Without

Removing Trim

Here is a shop kink which I hope proves a time saver in removing small dents from rear quarter panels. Simply remove the fender bolt nearest the damaged area and remove fixed nut with a punch. Through this hole a sizable dent can be pried out to shape. Then install a T-shaped fender fastener with a large flat washer and the hole is gone. This saves cutting a hole in the wheel house or removing the inside trim, thus no welding is necessary, eliminating all fire hazards. *Paul H. Stockton, Jr., 422 N.W. 17th, Grand Prairie, Texas.*

Quick Way to Obtain Tight

Hood Hinge Adjustment

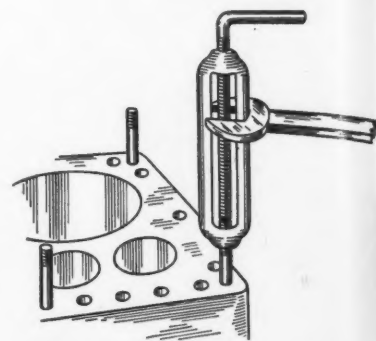
To adjust hood hinges so that the rear of the hood will fit down tight on the cowl, raise the hood and loosen all hinge bolts on the cowl. Lower the hood, place rope over the hood at rear and tie the ends of the rope to the fender braces or the frame. Tie the rope tight so as to pull the rear of the hood down against the cowl. Use cardboard or cloth under the rope. Then raise the front of the hood about 3 or 4 in., or until some strain is placed on it. Block it up with strain on it. Then tighten the hinge bolts inside of the cowl. Remove the rope and tighten the hinge bolts on the outside of the cowl. *Kenneth Murphy, Route No. 4, Carmi, Illinois.*

Turnbuckle Can Be Used

As a Stud Remover

We converted a turnbuckle into a handy stud remover or driver when no stud remover was available. Just remove one of the screws

from the buckle and bend the outer end of the other one at right angles as shown in the sketch. In use turn the buckle down on the stud



and then run the screw in the other end of the buckle down tightly on the end of the stud. Use a wrench on the turnbuckle to remove the stud. *Joseph Shepard, 88-48 162nd Street, Jamaica, New York.*

Ground Down Sockets

Remove Badly Worn Nuts

Here is a shop kink that will save a lot of time, temper, and skinned knuckles when trying to take off old fender bolts where the heads and corners are partly rusted away and even a new socket will slip off. These bolts are mostly $\frac{5}{16}$ in. and $\frac{3}{8}$ in. Take a $\frac{1}{2}$ in. or $\frac{9}{16}$ in. 6 or 12 point socket. Grind down to about $\frac{1}{4}$ in. from where serration ends inside the socket. This will give you sharp edges on the outer and inner part of the socket. You can now drive the socket on the bolt head so that the inside or bottom of the socket will also hold tight enough to remove the bolt. I used to throw my worn out sockets away but found out that by grinding them down they will hold better than a new one for this purpose. *Bill Schwarz, c/o Franklin Garage, 6203 Franklin Blvd., Cleveland, Ohio.*

Easy Method of Removing Full

Hub Caps Without Damage

The full caps are hard to pry off without damaging the edges of the cap. We use a suction plunger used for cleaning sinks. Find a place free from dents and push in so suction will form and pull out quickly. The cap will snap off. *Tak Tsuchida, E. 827 10th, Spokane, Washington.*

Exacting Tests

PROTECT

AMERICA'S FINEST IGNITION SERVICE



Operator is checking impregnated condenser pills for capacity and short circuit after pills have been subjected to excess voltage for leakage and before assembly in case.

The remarkable assurance Auto-Lite parts afford expert service men is proved by this fact: more than half of America's car makers specify Auto-Lite. This approval is based on findings from most exacting tests backed by surveys of results in actual use. To consistently deliver unfailing dependability, Auto-Lite leaves nothing to chance. Every material, every de-

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Canadian inquiries should be addressed to Sarnia, Ontario



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APPROVAL OF LEADING CAR, TRUCK, AND TRACTOR MAKERS . . . as original equipment, after most searching tests by engineers.

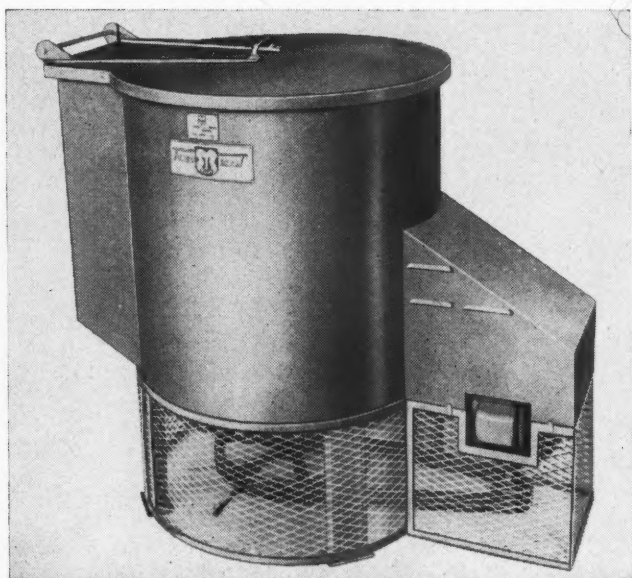


FINISHED PRODUCTS TESTS . . . every component and assembly passes repeated tests, checked constantly with laboratory research.

Money cannot buy better Automotive Electrical Equipment

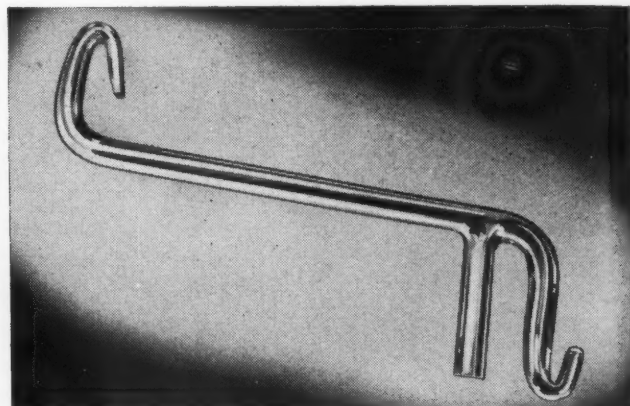
NEW Products

SHOW WINDOW



▲ 410. Parts Washing Machine

Storm-Vulcan, Inc., introduces a new type washing machine for motor blocks and parts. The machine, known as Turbo Blast, uses water, heat, agitation and detergent, and is said to clean oil, grease and dirt from motor blocks and parts quickly and economically. A special labyrinth seal has been developed which protects bearings.

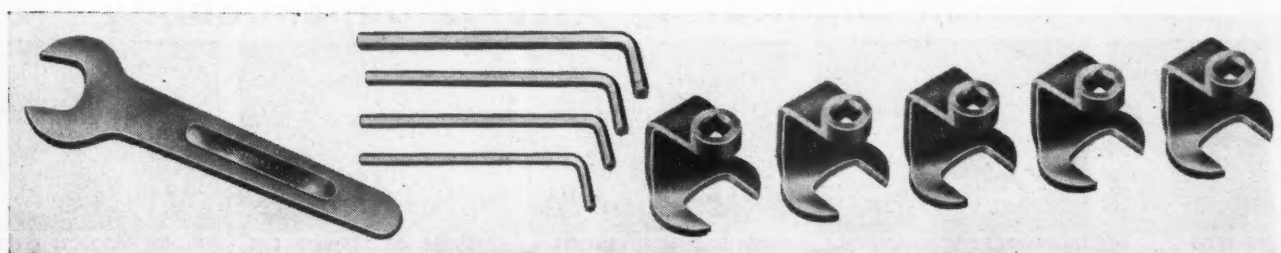


▲ 411. Multi-Purpose Tool

Martin Quick-Trim Company is introducing the Multi-Tool, for use in turning fender beads, pulling jammed fenders, aligning bumper arms, bending frame horns, and other jobs which require leverage in hard-to-get-at spots. The manufacturer states that the tool is useful in many capacities where ordinary makeshift tools might waste time.

▼ 412. Caster-Camber Wrench Set

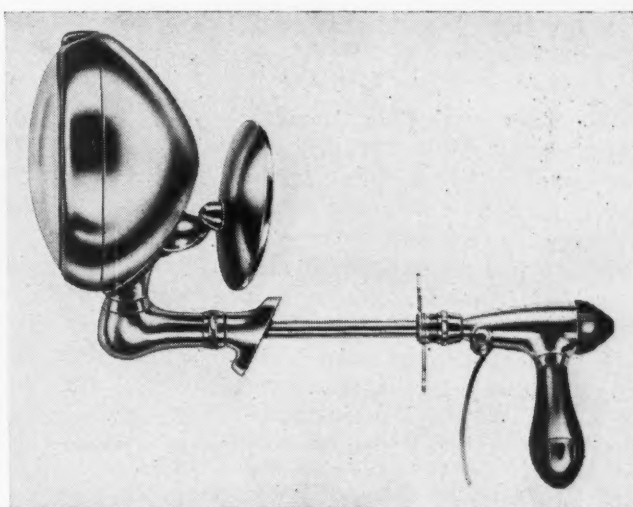
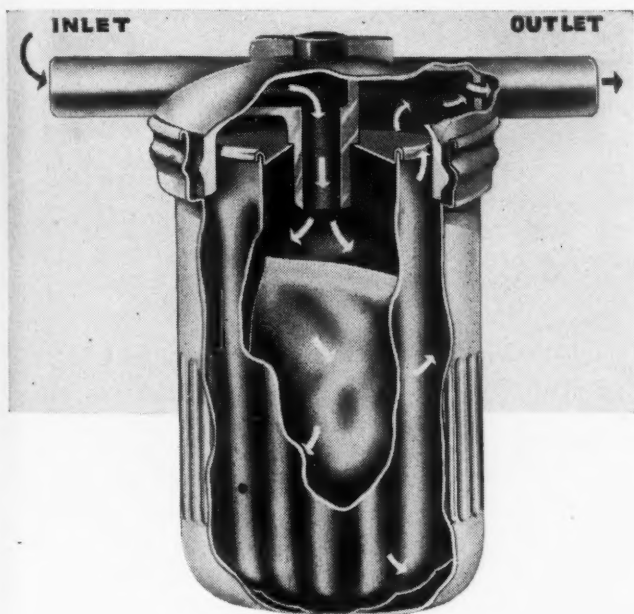
The Owatonna Tool Company is manufacturing a caster-camber wrench set for making front end adjustments on all late model cars. The set consists of ten wrenches, one flat open end, five U-shaped $\frac{1}{2}$ in. drive wrenches and four Allen type wrenches. Each tool in the set is designed to make the necessary adjustments despite the close quarters in which they must operate.



**For Further Information
Use Postcard Facing Next Page**

▼ 413. Spotlight Mirror

The Appleton Electric Company has designed a spotlight-mounting mirror for use on the Appleton and Lorraine Spotlights. This rear view mirror mounts to the swivel base by means of a single screw. On late model lights the bushing in the swivel base is pre-tapped at the factory so that installation of this mirror can be made. The mirror is cased in chrome-plated brass, and mounted on a free-action ball-and-socket.



◀ 414. Cooling Water Conditioner

The Fram Corporation has introduced its radiator and water cleaner for cars, trucks and buses. The device is designed to inhibit rust and corrosion, soften coolant water to stop scale deposits, and filter rust, scale and foreign particles from the coolant. A controlled amount of water flows continuously into the unit. Water contacts the chemicals for softening and inhibiting and passes through the filtering media where all solids are removed. It is said to be easy to install and priced economically, and the unit comes in two models designed to fit all cars, trucks and buses.

◀ 415. Wheel Balancer

The Manbee Equipment Division announces the improved balance master, a wheel balancing machine powered with a half horsepower repulsion induction motor that is claimed to bring the wheel to 85 mph speed in a few seconds. The balancer measures both static and dynamic unbalance on the same spindle. Colored lights indicate dynamic unbalance, showing where to put the weight and exactly how much weight to use. A spirit level gives direct indication for static balance.

(Continued on page 64)



New Products Show Window

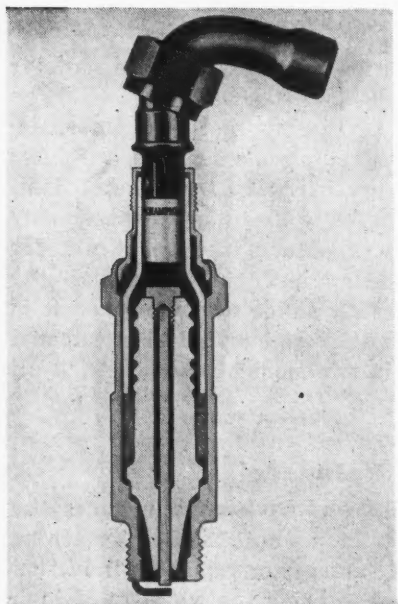
Continued from Page 63

416. Car Heater

E. A. Laboratories, Inc., announces the Traveaire, a hot water heater with a built-in ventilation system, available for General Motors and Chrysler cars. The new unit features a multiple speed heater fan control, visual temperature control, defrosting and foot warming efficiency, and no sacrifice of leg room because the heater mounts out of sight high on the fire wall of the dash.

417. Spark Plug Lead

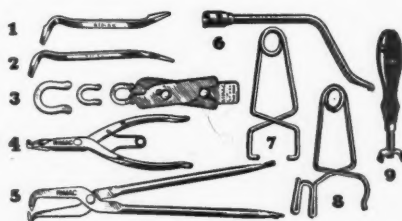
Champion Spark Plug Company has made available a waterproof and explosion proof assembly which permits standard automotive type ignition cable to be connected to shielded automotive and industrial type spark plugs. The assembly consists of a terminal sleeve, a rubber grommet, a brass bushing and a 3/4-in. brass nut having 5/8 in.-24 threads. The design of the grommet and bushing are claimed to preclude any water



from settling around the connector; the grommet extension helps eliminate sharp bends and the resulting breaks in the insulation of the ignition cable near the spark plug.

418. Brake Tools

Rinck-McIlwaine, Inc. announces a complete line of brake service tools. (1) A brake adjusting tool for Bendix brakes. This tool is shaped to avoid obstruction of frame fittings, shock absorbers, etc. (2) A brake adjusting tool. Eight inches overall with 3/8 in. octagon stock. (3) Horseshoe key



remover for brake shoe anchor studs. (4) Lock ring pliers for spreading snap lock rings on brakes, transmissions, pedal shafts, etc. (5) Brake spring pliers, with wide jaw capacity. (6) Spring remover and installer for Bendix and others having springs hooked on to pin. (7) Hydraulic brake clip. Designed for cars and trucks having double end pistons. (8) Hydraulic brake clip designed for use on single end cylinders. (9) Lock cap remover with wood handle.

419. Hack-Saw

K-D Manufacturing Company announces the addition of the ZipSaw, a round hacksaw blade, to its line. The ZipSaw saws in any direction and can be used on any standard hacksaw frame on which blades hook over the pins. Examined under a glass, the blade is spiral, like a round file. It saws through material, the manufacturer states, without clogging or tilting the saw frame. It follows intricate pattern lines and is non-chattering on tubing, pipe, and light gage metals. The blade is made of flexible hardened steel which is said to stay sharp through continued use, and to wear as long or longer than ordinary blades.

420. Parts Catalog

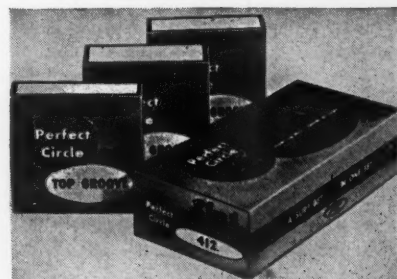
The Weatherhead Company is distributing a new automotive parts catalog containing complete technical information and car manufacturers' listings of all the original equipment parts manufactured by The Weatherhead Company. Specialized part number interchange information is contained in this catalog.

421. Drain Pan

The Alemite Division of the Stewart-Warner Corporation has developed a new extension pan which hooks over the rim of any drain bowl or bucket to speed up draining and servicing of crankcases, differentials, automatic transmissions and fluid couplings. In addition to permitting the removal of material from two or more drains simultaneously, the extension drain pan can be used to service drain plugs which are difficult to reach. For instance, it can be pushed through the saddle of a twin post lift.

422. Piston Ring Set

The Perfect Circle Corporation announces a new piston ring set designated as 2-in-1. The set consists of two chrome plated rings per piston, top compression as well as the oil ring and in addition to normal springs, an optional set of HiPressure springs is



packed with the oil rings for use in badly worn engines. The two complete sets of optional pressure springs are identified by the appearance of the ends. Normal pressure springs are recommended for installation in rebored or only slightly worn cylinders, while the HiPressure springs are recommended for badly worn engines.

(Continued on page 66)

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HERE'S HOW TO GET

Free Information

Here is a recap of the New Products described in this issue, along with their code numbers.

On each of the postage-paid postcards below you can request further data on items described in this New Products section. Fill out one of the sections completely for each item in which you are interested.

- 410. Parts Washing Machine
- 411. Multi-Purpose Tool
- 412. Caster-Camber Set
- 413. Spotlight Mirror
- 414. Water Conditioner
- 415. Wheel Balancer
- 416. Car Heater
- 417. Spark Plug Lead
- 418. Brake Tools
- 419. Hack-Saw
- 420. Parts Catalog
- 421. Drain Pan
- 422. Piston Ring Set
- 423. Light Tester
- 424. Engine Chart
- 425. Dynamometer
- 426. Inspection Chart
- 427. Impact Driver
- 428. Cleaning Machine
- 429. Nuts With Washers
- 430. Body Parts
- 431. Stud Removers
- 432. Shock Booklet
- 433. Battery Line
- 434. Helper Springs
- 435. Window Latch
- 436. Bushing Expander
- 437. Unit Lift
- 438. Block Springs
- 439. Silicone Polish
- 440. Oil Tester
- 441. Catalog
- 442. Door Rubbers

USE THESE POSTCARDS

<p style="text-align: right;">11/50</p> <p>Name</p> <p>Title</p> <p>Company</p> <p>Co. Address</p> <p>Chilton's MOTOR AGE, Phila. 39</p> <p style="font-size: small; text-align: right;">Write in the number of the product about which you want more information</p>	<p style="text-align: right;">11/50</p> <p>Name</p> <p>Title</p> <p>Company</p> <p>Co. Address</p> <p>Chilton's MOTOR AGE, Phila. 39</p> <p style="font-size: small; text-align: right;">Write in the number of the product about which you want more information</p>
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Send Me More Information on the

"Care Will Save Your Car"
Advertising and Sales Promotion Plan
for Automotive Retailers.

Name

Title

Company

Company Address

Is it a Dealership.....or an Independent Repair Shop.....

Chilton's MOTOR AGE, Phila. 39

New Products Show Window

Continued from Page 64

423. Light Tester

The Weaver Manufacturing Company announces the Photo-Scope Model WX-45 headlight tester which can be calibrated to floor slope. The portable Photo-Scope can be used in any stall having a reasonably smooth floor, it is stated, and calibration to floor level is accomplished by a cali-

brating stand and aiming dials right on the tester. Another model is also available which is on a track type base for permanent installation.

424. Engine Chart

B. M. Ikert is publishing an engine tune-up chart measuring 24 x 36 in. Printed on heavy

paper stock, it shows logical engine tune-up procedure on subjects of lubrication, fuel, battery, cables, compression, spark plugs, distributor coil, and so forth. It has a large basic illustration of engine processes. It is said to be useful for training personnel and assisting the trade in more competently selling car owners on essential service operations and parts.

425. Dynamometer

The Clayton Mfg. Co. announces a line of low cost engine dynamometers designed for engine run-in in service shops and end of production line testing. These models will operate with horsepower ratings from 50 to 2,000 at many different speeds. The load can be varied instantly at will, or maintained indefinitely without change. Loads may be increased or decreased and then re-established without sacrificing accuracy, according to the manufacturer. Standard equipment includes direct reading electric speed and horsepower meters.

426. Inspection Unit

The Magnaflux Corporation has developed a new inspection unit for automotive overhaul shops. The DR-543 unit furnishes sensitivity for inspection of truck, bus, or passenger car mechanical parts up to 54 in. long. Magnaglo, used for inspection under black light in the folding hood, locates all fatigue cracks and similar defects in parts during overhaul. A glowing fluorescent line is built up on each defect so that all cracked parts can be found with minimum testing time, the manufacturer states.

427. Impact Driver

H. K. Porter, Inc., is marketing the Impakdriver, a tool for loosening or tightening screws, bolts or nuts. The Impakdriver is constructed on a cam principle which translates the impact from a hammer's blow into torque. It is said to be particularly useful for start-

(Continued on page 116)

FIRST CLASS
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Sec. 34.9, P. L. & R.
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Chilton's MOTOR AGE

Flat Rate and Service Manual

S e r v i c e S u g g e s t i o n s

The information presented here has been compiled from the Factory Service Bulletins, as an additional service of Chilton's Motor Age Flat Rate and Service Manual Department.

Selected by William H. Lutton,
Assistant Editor
Chilton Motor Age Flat Rate and
Service Manual

Caution with the Pontiac Oil Pump Suction Pipe

Whenever you are reassembling an engine or endeavoring to find the cause of any trouble which might have resulted from oil starvation in an engine, always make certain that the oil pump suction pipe is properly installed.

If the nut is loose or if it bottoms before it tightens on the pipe, or if the suction pipe is not seated in the block before the nut is tightened, air will be drawn into the oil pump instead of oil.

Moving the Arm Rest on Cadillac Front Doors

Some cases have arisen on 1950 Cadillacs where there is interference between the arm rest and the front seat when closing the door. This usually occurs when the seat is in the forward position, and can be remedied by changing the arm rest's position.

Remove the small strip of leather that covers the cross-head screws in the arm rest by prying it up with a screwdriver.

Remove all the screws and pry up and out on the arm rest.

Then elongate the holes in the arm rest to give adjustment in the desired direction. If necessary, you can elongate the arm rest retaining clips without removing the trim pad, as they are located in the cardboard trim panel only, and not in the inner door panel metal.

This procedure can be followed in cars having manually operated windows, where the clearance is small between the door glass regulator handle and the front of the arm rest.

Air Cleaner Rattle on Nash Statesman 2600

There have been many cases reported where the carburetor air cleaner has been suspected of causing a rattle or vibration, where actually the rattle was due to the carburetor being loose on its mounting pad.

This looseness was caused by the compression of the lead carburetor gasket. To eliminate this condition a new corebestos type gasket (Part No. 3108576) has been developed, and should be installed below the carburetor spacer in place of the lead gasket.

This new corebestos gasket has replaced the lead gasket in production, effective at Engine Serial No. S-124681.

Correcting Condensation Condition in Distributor

Should you have any hard starting troubles which may be traced to a condensation condition in the Plymouth distributor, the following

simple remedy may be used. Drill a $\frac{1}{8}$ in. hole through the side of the distributor cap, just above the shoulder and under the spring clip on the lower side. This will rectify this condition besides being a preventive measure which can be applied to all distributor caps.

Cadillac Transmission Service Information

If a condition exists in which the standard transmission on a Cadillac jumps out of high gear, it is usually caused by misalignment of the transmission to the engine. This misalignment can be caused by incorrect assembly operations. After the flywheel housing is securely bolted to the crankcase, check the alignment of the transmission bearing hole, and run out of the rear face of the housing should be checked with reference to the center line of the crankshaft.

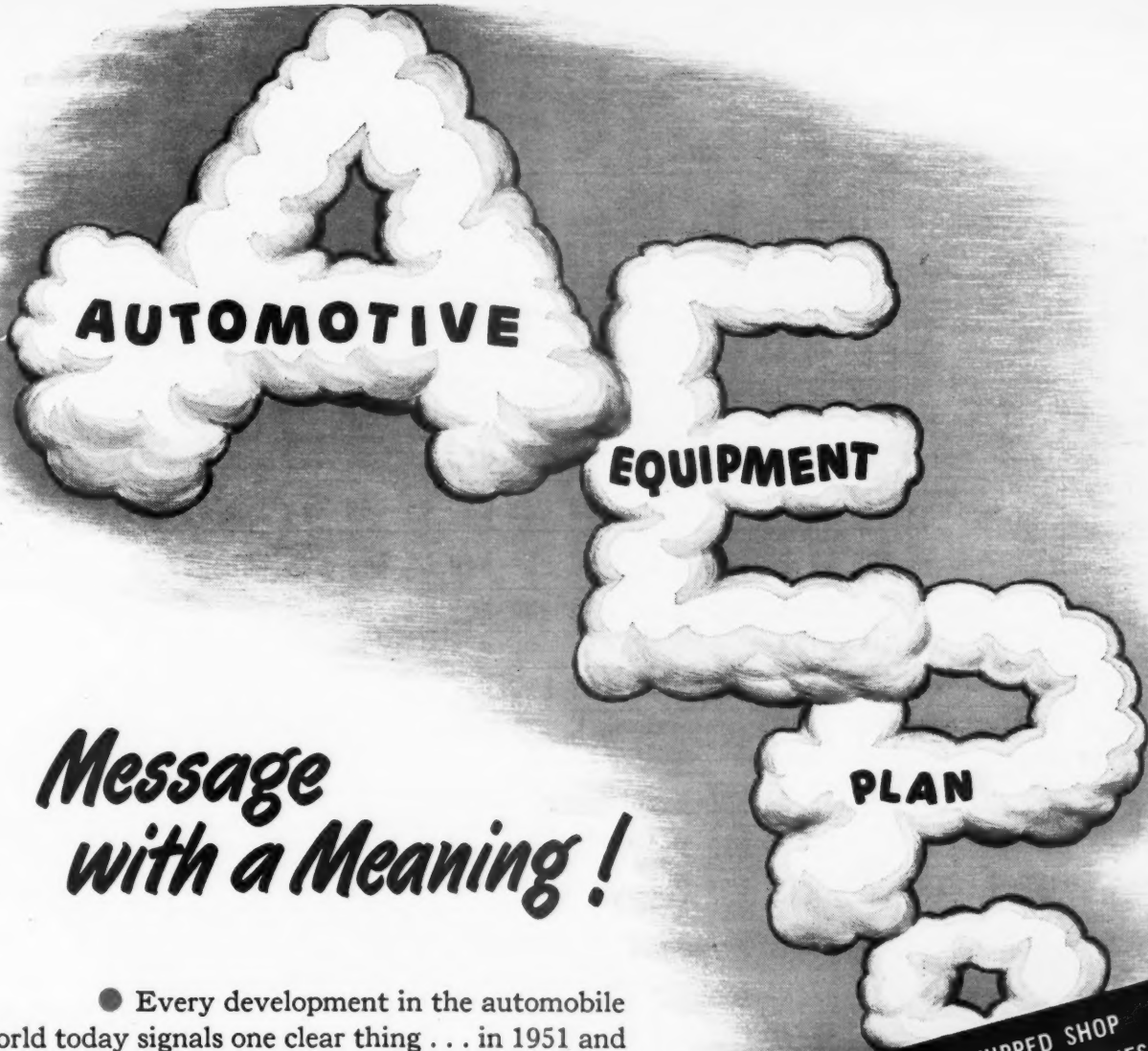
Now the lower flywheel housing must be bolted to the flywheel housing with just enough torque to compress the lock washers so that the housing will slide when tightening the screws that hold the lower housing to the crankcase. These screws are to be torqued to specifications and then, finally, the lower housing to cover screws are tightened to specified torque.

The clutch connection gear pilot bushing in the flywheel on these standard transmissions requires lubrication. So lubricate the pilot bearing in the flywheel with wheel bearing lubricant every time the transmission is removed.

Current Passenger Car Price, Weight and Body Table

Following are prices at factory for cars with standard equipment as of October 20, 1950.
State or local taxes, transportation and finance charges and optional equipment are extra.

BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight
BUICK				
Special 40				
Jt. Bk. Cpe., 2d.	1680	123	1803	3615
Jt. Bk. Sdt., 2d.	1730	128	1858	3655
Jt. Bk. Sdt., 4d.	1770	129	1899	3665
Jt. Bk. Sdt., 4d.	1780	129	1909	3715
Tr. Sedan, 4d.	1810	131	1941	3710
Jt. Sed. Di., 4d.	1820	132	1952	3720
Tr. Sed. Di., 4d.	1850	133	1983	3720
Super 50				
Jt. Bk. Sdt., 2d.	1896	145	2041	3645
Riviera, 2d.	1888	151	2039	3790
Tour. Sed., 4d.	1989	150	2139	3745
Riv. Sed., 4d.	2058	154	2212	3870
Convertible.	2308	168	2476	3645
Est. Wagon.	2658	186	2844	4115
Rdmaster 70				
Jt. Bk. Sdt., 2d.	2343	185	2528	4025
Tour. Sed., 4d.	2443	190	2633	4135
Riviera, 2d.	2443	190	2633	4135
Riv. Sed., 4d.	2543	195	2738	4220
Riv. Sed. Di., 4d.	2568	196	2764	4215
Riviera, Di.	2653	201	2854	4245
Convertible.	2773	208	2981	4345
Est. Wagon.	3178	229	3407	4470
Est. Wag., Di.	3203	230	3433	4430
CADILLAC				
Series 61				
Club Coupe, 2d.	2530	171	2701	3870
Tour. Sedan, 4d.	2690	176	2866	3870
Series 62				
Coupe.	2960	190	3150	4010
Coupe.	3040	194	3234	4010
Cpe. de Ville.	3315	208	3523	4150
Conv. Coupe.	3440	214	3654	4150
Series 60				
Sedan, 4d.	3565	132	3707	4150
Series 75				
Sedan, 7p, 4d.	4480	290	4770	4950
Imperial.	4680	299	4959	4950
CHEVROLET				
Styliline HJ				
Bus. Coupe.	1240	89	1329	3025
Sedan, 2d.	1310	93	1403	3085
Spt. Coupe.	1315	93	1408	3050
Sedan, 4d.	1355	95	1450	3120
Fi'tline HJ				
Sedan, 2d.	1310	93	1403	3080
Sedan, 4d.	1355	95	1450	3115
Styliline HK				
Sedan, 2d.	1385	97	1482	3100
Spt. Coupe.	1400	98	1498	3090
Sedan, 4d.	1430	99	1529	3150
Conv. Coupe.	1730	117	1847	3380
Bel Air Coupe.	1630	111	1741	3295
Sta. Wag. Steel.	1870	124	1994	3460
Fi'tline HK				
Sedan, 2d.	1385	97	1482	3115
Sedan, 4d.	1430	99	1529	3145
CHRYSLER				
Royal 6				
Club Coupe.	2002	112	2114	3540
Sedan, 4d, 6p.	2021	113	2134	3610
Sedan, 4d, 8p.	2705	150	2855	4190
Sta. Wagon, 9p.	2998	165	3163	4055
Twn. and City.	2591	144	2735	3964
Windoor 6				
Club Coupe.	2186	122	2308	3670
Sedan, 4d, 6p.	2206	123	2329	3765
Traveler, 6p, 4d.	2425	135	2560	3830
Newport.	2498	139	2637	3875
Conv. Coupe.	2598	143	2741	3905
Sedan, 4d, 8p.	2890	160	3050	4295
Limousine.	3010	168	3178	4400
Saratoga 8				
Club Coupe.	2478	138	2616	4110
Sedan, 4d, 6p.	2503	139	2642	4170
New Yorker 8				
Club Coupe.	2568	144	2732	4110
Sedan, 4d, 6p.	2613	145	2758	4190
Newport.	2969	164	3133	4370
Conv. Coupe.	3069	169	3238	4360
Twn. and City 8				
Imperial	3795	208	4003	4675
Sedan, 6p, 4d.	2895	160	3055	4245
Sedan, 4-d, Del.	3010	168	3178	4250
Crown Imp.				
Sedan, 4d, 8p.	4970	259	5229	5235
Limousine, 8p.	5070	264	5334	5305
CROSLEY				
Hotshot.	809	63	872	1175
Sedan, Del.	816	64	882	1363
Convertible.	818	64	882	1320
CROSLEY (Cont. inued)				
Sta. Wagon.	849	67	916	1403
Super Sports.	859	68	925	1403
Sup. Sed., Del.	883	68	951	1403
Sup. Conv.	886	68	954	1403
Sup. Sta. Wgn.	914	70	984	1403
DE SOTO				
De Luxe				
Club Coupe.	1871	105	1976	3450
Sedan, 4d.	1881	105	1986	3525
Carry-All.	2075	116	2191	3600
Sedan, 8p.	2535	141	2676	3995
Custom				
Club Coupe.	2042	114	2155	3575
Sedan, 4d, 6p.	2059	115	2174	3640
Sportsman.	2358	131	2489	3735
Convertible.	2443	135	2578	3815
St. Wgn. Steel.	2574	143	2717	3900
Sedan, 8p.	2713	160	2863	4115
Sta. Wagon.	2932	161	3093	4035
Suburban.	3013	166	3179	4400
DODGE				
Wayfarer, D33				
Coupe, 3p.	1525	86	1611	3095
Roadster, 3p.	1635	92	1727	3190
Sedan, 2d.	1635	92	1727	3190
Spt. Roadster				3155
Meadowb'k D34				
Sedan.	1750	98	1848	3395
Coronet D34				
Club Coupe.	1812	102	1914	3340
Sedan, 4d.	1825	102	1927	3405
Twn. Sedan.	1905	107	2012	3410
Conv. Coupe.	2206	123	2329	3590
Sta. Wagon.	2479	138	2617	3850
Sedan, 8p.	2479	138	2617	4045
Diplomat.				3515
FORD				
Six				
Bus. Coupe.	1236	97	1333	2925
Tudor.	1323	102	1424	2961
Fordor.	1368	104	1472	3040
Custom 6				
Tudor.	1405	106	1511	2988
Club Coupe.	1405	106	1511	2985
Fordor.	1450	109	1559	3047
Sta. Wagon.	1895	133	2028	3465
Eight				
Bus. Coupe.	1318	101	1419	2965
Tudor.	1393	105	1498	3021
Fordor.	1438	107	1545	3080
Custom 8				
Tudor.	1480	110	1590	3028
Club Coupe.	1485	110	1595	3085
Fordor.	1525	112	1637	3277
Conv. Coupe.	1820	128	1948	3277
Sta. Wagon.	1970	137	2107	3510
FRAZER				
Sedan, 4d.	2221	138	2359	3535
Vagabond.	2259	140	2399	3535
HUDSON				
Pacemaker 6				
Coupe, 3p.	1773	140	1913	3475
Brougham.	1900	147	2047	3510
Sedan, 4d.	1940	149	2089	3460
Club Cpe.	1940	149	2089	3460
Conv. Brghm.	2400	173	2573	3750
Super 6				
Brougham.	2029	151	2180	3565
Sedan, 4d.	2074	154	2228	3590
Club Cpe.	2074	154	2228	3555
Conv. Brghm.	2572	181	2753	3750
Commodore 6				
Club Cpe.	2225	166	2391	3840
Sedan, 4d.	2248	168	2416	3855
Conv. Brghm.	2738	195	2933	3840
Commodore 8				
Club Cpe.	2307	170	2477	3855
Sedan, 4d.	2330	172	2502	3875
Conv. Brghm.	2820	199	3019	3865
Hornet				
Club Cpe.	2307	170	2477	3855
Sedan, 4d.	2330	172	2502	3875
Conv. Brghm.	2820	199	3019	3865
KAISER				
Henry J				
Sedan, 2d, 4 cyl.				1299
Sedan, 2d, 6 cyl.				1429
Special				
Bus. Coupe.	1784	115	1899	3150
Club Coupe.	1917	122	2039	3150
Sedan, 2d.	1936	123	2059	3150
Sedan, 4d.	1983	126	2109	3150
KAISER (Continued)				
Traveler, 2d.	2031	128	2159	3150
Traveler, 4d.	2078	131	2209	3150
DeLuxe				
Bus. Coupe.	1936	123	2059	3150
Sedan, 2d.	2040	129	2169	3150
Club Coupe.	2059	130	2189	3150
Sedan, 4d.	2088	131	2219	3225
Traveler, 2d.	2135	134	2269	3225
Traveler, 4d.	2183	136	2319	3225
LINCOLN				
Coupe, 6p.	2350	179	2529	4080
Spt. Sedan, 4d.	2395	181	2576	4085
Lido.	2535	186	2721	4080
Cosmopolitan				
Spt. Sedan.	2975	212	3187	4435
Capri.	3025	215	3240	4430
Convertible, 6p.	3185	221	3406	4435
Convertible, 6p.	3700	250	3950	4610
MERCURY				
Coupe, 72A.	1745	130	1875	3345
Coupe, 72B.	1845	135	1980	3430
Spt. Sedan.	1895	137	2032	3470
Coupe, 72C.	2005	141	2146	3430
Coupe, 72D.	2015	142	2157	3430
Convertible.	2255	167	2412	3710
Sta. Wagon.	2397	164	2561	3755
NASH				
Rambler				
Convertible.	1723	114	1837	2430
Sta. Wagon.	1723	114	1837	2430
Suburban.	1623	100	1723	2430
Statesman				
Bus. Coupe.	1596	114	1710	2900
Super				
Sedan, 2d.	1671	119	1790	2930
Club Cpe.	1693	119	1812	2940
Sedan, 4d.	1696	119	1815	2965
Custom				
Sedan, 2d.	1821	128	1949	3325
Club Cpe.	1843	128	1971	3325
Sedan, 4d.	1846	128	1974	3350
Ambassador				
Super				
Sedan, 2d.	1997	140	2137	3325
Club Cpe.	2018	140	2158	3335
Sedan, 4d.	2022	140	2162	3350
Custom				
Sedan, 2d.	2147	149	2296	3390
Club Cpe.	2168	149	2317	3390
Sedan, 4d.	2172	149	2321	3390
OLDSMOBILE				
Series 76-6				
Club Coupe.	1600	119	1719	3260
Sedan, 2d.	1625	120	1745	3280
Club Sedan.	1640	121	1761	3290
Club Cpe., Del.	1665	122	1787	3280
Club Sed., Del.	1690	123	1813	3285
Sedan, 4d.	1695	124	1819	3320
Sed., 2d, Del.	1705	124	1829	3295
Sed., 4d, Del.	1780	127	1887	3340
Hol. Coupe.	1870	133	2003	3335
Hol. Cpe., Del.	1870	138	2108	3385
Conv. Coupe.	1995	140	2135	3585
Sta. Wagon.	2210	152	2362	3610
Sta. Wgn., Del.	2345	159	2504	3615
Series 88-8				
Club Coupe.	1745	133	1878	3435
Club Sedan.	1770	134	1904	3475
Sedan, 2d.	1785	135	1920	3485
Club Cpe., Del.	1820	136	1956	3455
Sedan, 4d.	1840	138	1978	3515
Club Sed., Del.	1845	137	1982	3485
Sed., 2d, Del.	1880	138	1998	3500
Sed., 4d, Del.	1915	141	2056	3520
Hol. Coupe.	2015	147	2162	3510
Hol. Cpe., Del.	2115	152	2267	3565
Conv. Coupe.	2140	154	2294	3745
Sta. Wagon.	2355	172	2527	3775
Sta. Wgn., Del.	2490	172	2	



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Current Engine and Tune-up Specifications

ENGINE										TUNE-UP DATA										STEERING									
Wheelbase (In.)	No. of Cylinders, Bore and Stroke	Taxable Hp.	Piston Displacement (Cu. In.)	Maximum Brake Hp. at Specified R.P.M. (With Bare Engine)	Compression Ratio	Spark Plug Make and Type	Rings		VALVES				IGNITION		Cooling System Capacity (Qts.)	Caster (Deg.)	Camber (Deg.)	Toe-In (In.)	King Pin Inclination (Deg.)										
							No. and Width	No. and Width	Seat Angle	Stem Diameter (In.)	Operating Tappet Clearance	Inlet Valve Timing	Deg. Inlet or After TC	Timing Marks						Breaker Point Gap	Spark Plug Gap	Spark Occurs	Timing Marks	Timing Located					
Buick.....Special 40	8-3 1/2 x 4 1/2	30.6	248.1	115-3600	6.8	AC-48	2-3/8	2-3/8	45	45	.372	.015H	13BT	None	.015	.025	4BT	Fly	Fly	to 1/8	4 1/4								
Buick.....Super, 60	8-3 1/2 x 4 1/2	32.5	263.3	124-3600	6.9	AC-48	2-3/8	2-3/8	45	45	.372	.015H	13BT	None	.015	.025	4BT	Fly	Fly	to 1/8	4 1/4								
Buick.....Roadmaster, 70	8-3 1/2 x 4 1/2	37.6	320.2	152-3600	7.2	AC-48	2-3/8	2-3/8	45	45	.372	.015H	14BT	None	.015	.025	6BT	Fly	Fly	to 1/8	4 1/4								
Cadillac.....61, 62, 60	8-3 1/2 x 4 1/2	46.5	331.0	160-3600	7.5	AC-46-5	2-3/8	2-3/8	44	44	.343	.015H	24BT	None	.015	.035	5BT	VD	VD	to 1/8	5 5/8								
Cadillac.....Six, 75	8-3 1/2 x 4 1/2	46.5	331.0	160-3600	7.5	AC-46-5	2-3/8	2-3/8	44	44	.343	.015H	24BT	None	.015	.035	5BT	VD	VD	to 1/8	5 5/8								
Chevrolet.....Six, HJ-HK	6-3 1/2 x 3 1/2	29.4	216.5	92-3400	6.8	AC-46-5	2-1/4	2-1/4	30	30	.341	.006H	18T	Fly	.021	.035	5BT	Fly	Fly	0 to 1/8	4 3/4								
Chevrolet.....2100	6-3 1/2 x 3 1/2	30.4	235.5	105-3600	6.7	AC-46-5	2-1/4	2-1/4	30	30	.341	.006H	18T	Fly	.021	.035	5BT	Fly	Fly	0 to 1/8	4 3/4								
Chrysler.....Six, C-48	6-3 1/2 x 4 1/2	26.3	226.8	116-3600	7.0	AL-AR-5	2-3/8	2-3/8	45	45	.341	.008H	10BT	VD	.020	.035	TC	VD	VD	0 to 1/8	4 3/4								
Chrysler.....Eight, C-49	6-3 1/2 x 4 1/2	33.8	323.5	135-3200	7.2	AL-AR-5	2-3/8	2-3/8	45	45	.341	.008H	10BT	VD	.020	.035	TC	VD	VD	0 to 1/8	4 3/4								
Chrysler.....Eight, C-50	6-3 1/2 x 4 1/2	33.8	323.5	135-3200	7.2	AL-AR-5	2-3/8	2-3/8	45	45	.341	.008H	10BT	VD	.020	.035	TC	VD	VD	0 to 1/8	4 3/4								
Crosley.....Four, CD-49	4-2 1/2 x 2 1/2	10.0	44.0	28.5-5400*	7.8	AL-AR-7	2-1/4	2-1/4	45	45	.313	.004C	.009	5BT	.020	.040	.025	8BT	Fly	Fly	to 1/8	6 1/2							
De Soto.....Six, S-14	6-3 1/2 x 4 1/2	28.3	238.6	112-3600	7.0	AL-AR-5	2-3/8	2-3/8	45	45	.341	.008H	10BT	VD	.019	.035	TC	VD	VD	0 to 1/8	4 3/4								
Dodge.....Six, D-33, D-34	6-3 1/2 x 4 1/2	25.3	230.2	103-3600	7.0	AL-AR-5	2-3/8	2-3/8	45	45	.340	.008H	10BT	VD	.020	.035	TC	VD	VD	0 to 1/8	4 3/4								
Ford.....Six, OHA	6-3 1/2 x 4 1/2	26.1	225.9	95-3300	6.8	CH-H10	2-093	2-093	45	45	.341	.010C	.015	11BT	.025	.030	TC	VD	VD	to 1/8	5 1/2								
Ford.....Eight, OBA	6-3 1/2 x 4 1/2	26.1	225.9	100-3600	6.8	CH-H10	2-093	2-093	45	45	.341	.010C	.015	11BT	.025	.030	TC	VD	VD	to 1/8	5 1/2								
Ford.....Six, 515, 516	6-3 1/2 x 4 1/2	26.3	226.2	115-3650	7.3	AL-A5G	2-093	2-093	45	45	.341	.014C	.014	10BT	.020	.030	TC	VD	VD	to 1/8	5 1/2								
Hudson.....500	6-3 1/2 x 4 1/2	30.4	232.0	112-4000	6.7	CH-H7	2-078	2-078	45	45	.341	.008H	.010H	7-18/8T	Fly	.020	.032	TC	Fly	Fly	to 1/8	3 3/8							
Hudson.....Six, 501-502	6-3 1/2 x 4 1/2	30.4	232.0	123-4000	6.7	CH-H7	2-078	2-078	45	45	.341	.008H	.010H	7-18/8T	Fly	.020	.032	TC	Fly	Fly	to 1/8	3 3/8							
Hudson.....Eight, 503-504	6-3 1/2 x 4 1/2	28.6	254.0	128-4200	6.7	CH-H8	2-093	2-093	45	45	.341	.008H	.010H	10-40/8T	Fly	.017	.027	.038	TC	CP	VD	to 1/8	3 3/8						
Kaiser.....Six, 511, 512	6-3 1/2 x 4 1/2	26.3	226.2	115-3650	7.3	AL-A5	2-093	2-093	45	45	.341	.014C	.014	10BT	.020	.030	TC	VD	VD	to 1/8	4 3/4								
Kaiser.....Stateman, 5140	6-3 1/2 x 4 1/2	16.6	134.2	68-4000	7.0	AL-A7	2-093	2-093	45	45	.373	.016	.020	9BT	CP	.020	.030	TC	Fly	Fly	to 1/8	4 3/4							
Kaiser.....Henry J	6-3 1/2 x 4 1/2	23.4	161.0	80-3800	7.0	AL-A7	2-093	2-093	45	45	.341	.016	.020	9BT	CP	.020	.030	TC	Fly	Fly	to 1/8	4 3/4							
Lincoln.....OEL-OEH	8-3 1/2 x 4 1/2	39.2	336.7	152-3600	6.8	CH-H10	2-093	2-093	45	45	.341	.011C	.015	10BT	VD	.015	.025	4BT	CP	CP	to 1/8	5							
Mercury.....OCM	8-3 1/2 x 4 1/2	32.5	255.4	110-3600	7.0	CH-H10	2-093	2-093	45	45	.341	.011C	.015	10BT	VD	.015	.025	4BT	CP	CP	to 1/8	5							
Nash.....Rambler, 5110	6-3 1/2 x 4 1/2	23.4	172.6	82-3800	7.3	AL-A5	2-093	2-093	45	45	.341	.015H	.019	8BT	None	.020	.030	TC	VD	VD	to 1/8	8 1/2							
Nash.....Stateman, 5160	6-3 1/2 x 4 1/2	23.4	184.0	85-3800	7.0	AL-A5	2-093	2-093	45	45	.341	.015H	.019	8BT	None	.020	.030	TC	VD	VD	to 1/8	8 1/2							
Nash.....Amb., 5160	6-3 1/2 x 4 1/2	27.3	234.8	115-3400	7.3	AL-A5	2-093	2-093	45	45	.372	.015H	.022	8 1/2 BT	None	.020	.030	TC	VD	VD	to 1/8	8 1/2							
Oldsmobile.....76	6-3 1/2 x 4 1/2	29.9	257.1	105-3400	6.5	AC-45	2-093	2-093	30	30	.342	.008H	.011H	4BT	None	.021	.040	TC	Fly	Fly	to 1/8	4 29/47							
Oldsmobile.....88	6-3 1/2 x 4 1/2	45.0	303.7	135-3600	7.2	AC-45	2-093	2-093	45	45	.342	.008H	.011H	4BT	None	.021	.040	TC	Fly	Fly	to 1/8	4 29/47							
Oldsmobile.....98	6-3 1/2 x 4 1/2	45.0	303.7	135-3600	7.2	AC-45	2-093	2-093	45	45	.342	.008H	.011H	4BT	None	.021	.040	TC	Fly	Fly	to 1/8	4 29/47							
Packard.....200-2401	8-3 1/2 x 4 1/2	39.2	288.0	135-3600	7.0	(k)	2-093	2-093	45	45	.341	.007H	.010H	15BT	.....	.015	.028	8BT	.....	.....	0 to 1/8	5 3/8			
Packard.....300-2402	8-3 1/2 x 4 1/2	39.2	327.0	150-3600	7.0	(k)	2-093	2-093	45	45	.341	.007H	.010H	15BT	.....	.015	.028	8BT	.....	.....	0 to 1/8	5 3/8			
Packard.....400-2406	8-3 1/2 x 4 1/2	39.2	327.0	155-3600	7.8	(k)	2-093	2-093	45	45	.341	.007H	.010H	15BT	.....	.015	.028	8BT	.....	.....	0 to 1/8	5 3/8			
Plymouth.....Six, P10, P20	6-3 1/2 x 4 1/2	25.3	217.8	97-3600	7.0	AL-AR-6	2-093	2-093	45	45	.340	.008H	.010H	12BT	VD	.020	.035	TC	VD	VD	to 1/8	4 3/4							
Pontiac.....Six, 25	6-3 1/2 x 4 1/2	30.4	239.2	90-3400	6.5	AC-45	2-093	2-093	45	45	.312	.012H	.012H	8BT	CC	.022	.025	8BT	VD	VD	to 1/8	5 1/2							
Pontiac.....Eight, 27	6-3 1/2 x 4 1/2	36.4	288.2	100-3600	6.5	AC-45	2-093	2-093	45	45	.312	.012H	.012H	8BT	CC	.022	.025	8BT	VD	VD	to 1/8	5 1/2							
Studebaker.....Six, 9G	6-3 1/2 x 4 1/2	21.8	189.8	85-4000	7.0	CH-J7	2-093	2-093	45	45	.312	.016C	.020	15BT	VD	.020	.025	2BT	VD	VD	to 1/8	5 1/2							
Studebaker.....Six, 17A	6-3 1/2 x 4 1/2	25.3	245.6	72-4000	7.0	CH-J7	2-093	2-093	45	45	.312	.016C	.020	15BT	VD	.022	.025	2BT	VD	VD	to 1/8	5 1/2							
Willis.....Six, 473	4-3 1/2 x 4 1/2	15.6	134.2	72-4000	7.4	CH-J7	2-3/8	2-3/8	45	45	.373	.016	.016	8BT	Fly	.020	.030	TC	Fly	Fly	to 1/8	5							
Willis.....Six, 473	4-3 1/2 x 4 1/2	23.4	161.0	75-4000	6.9	CH-J7	2-3/8	2-3/8	45	45	.341	.016	.016	8BT	Fly	.020	.030	TC	Fly	Fly	to 1/8	5							

Abbreviations

— With Standard Accessories

— Plus or Minus 1 1/2°

— At 1/2° Camber

— Depression in Camshaft Gear

— Do not recommend using a dwell meter for checking point opening

AL—The Electric Auto-Lite Corp.

AT—After Top Center

BT—Before Top Center

C—Cold

CC—Crankschaft and Camshaft Sprockets

CH—Champion Spark Plug Co.

CP—Crankshaft Pulley

DH—Distributor Housing

Fly—Flywheel

HA—Hydraulic Automatic Adjustment

HA—Top Center

TC—Timing Gears

TC—Timing Gears

VD—Vibration Damper

(l) P18=111°, P20=119 1/2°

(u) 120 and 124

(v) Left side 1/2° to 1/2° higher than right.

A—Rods removed from above

AA—Automatic Adjustment

AC—AC Spark Plug Div.

(d) Top ring .003; bottom ring .123.

(e) At 1000 Rpm.

(f) Top Ring 1/2; Middle Ring 1/2

(g) Top Ring 1/2; Middle Ring 1/2

(h) Top Ring 1/2; Middle Ring 1/2

(i) Top Ring 1/2; Middle Ring 1/2

(j) Top Ring 1/2; Middle Ring 1/2

(k) Auto-Lite A-5; AC46-5; Champion J-8.

(l) Upper Ring 1/2; Lower Ring 1/2

(m) D33=115°; D34=123 1/2°

(n) D33=115°; D34=123 1/2°

(o) D33=115°; D34=123 1/2°

(p) D33=115°; D34=123 1/2°

(q) D33=115°; D34=123 1/2°

(r) D33=115°; D34=123 1/2°

(s) D33=115°; D34=123 1/2°

(t) D33=115°; D34=123 1/2°

(u) D33=115°; D34=123 1/2°

(v) D33=115°; D34=123 1/2°

(w) D33=115°; D34=123 1/2°

(x) D33=115°; D34=123 1/2°

(y) D33=115°; D34=123 1/2°

(z) D33=115°; D34=123 1/2°

*Used with Powerglide transmission at extra cost.

(a) Model 61-122; 62-126; 60-130 in.

(b) 121 in. for OEL model; 125 in. for Cosmopolitan model.

(c) Upper Ring 1/8 in., Lower Ring 1/8 in.

(d) Top ring .093; bottom ring .123.

(e) AT 1000 Rpm.

(f) Top Ring 1/8; Middle Ring 1/8.

(g) Top Ring 1/8; Middle Ring 1/8.

(h) Top Ring 1/8; Middle Ring 1/8.

(i) Top Ring 1/8; Middle Ring 1/8.

(j) Top Ring 1/8; Middle Ring 1/8.

(k) Top Ring 1/8; Middle Ring 1/8.

(l) Top Ring 1/8; Middle Ring 1/8.

(m) Top Ring 1/8; Middle Ring 1/8.

(n) Top Ring 1/8; Middle Ring 1/8.

(o) Top Ring 1/8; Middle Ring 1/8.

(p) Top Ring 1/8; Middle Ring 1/8.

(q) Top Ring 1/8; Middle Ring 1/8.

(r) Top Ring 1/8; Middle Ring 1/8.

(s) Top Ring 1/8; Middle Ring 1/8.

(t) Top Ring 1/8; Middle Ring 1/8.

(u) Top Ring 1/8; Middle Ring 1/8.

(v) Top Ring 1/8; Middle Ring 1/8.

(w) Top Ring 1/8; Middle Ring 1/8.

(x) Top Ring 1/8; Middle Ring 1/8.

(y) Top Ring 1/8; Middle Ring 1/8.

(z) Top Ring 1/8; Middle Ring 1/8.

(aa) Top Ring 1/8; Middle Ring 1/8.

(ab) Top Ring 1/8; Middle Ring 1/8.

(ac) Top Ring 1/8; Middle Ring 1/8.

(

Give a '41



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**with
Pistons of
ALCOA
LO-EX!**

What driver wouldn't like a spanking new 1951 car? You can sell many of your customers "new-car" performance—by installing replacement pistons of genuine ALCOA LO-EX!

Here's what happens. Compression improves, because these light, strong pistons always fit properly—thanks to low-expansion alloy and modern piston design. ALCOA LO-EX dissipates heat fast. Your customer's engine runs cooler, quieter. Burns less gas and oil.

Results like these are good advertising for your shop. Standardize on replacement pistons marked ALCOA LO-EX—cast by Alcoa, finished by famous piston makers. ALUMINUM COMPANY OF AMERICA, 1850L Gulf Building, Pittsburgh 19, Pennsylvania.

NO HOT SPOTS!

FULL COMPRESSION!

EASY ON GAS AND OIL!



Aluminum Pistons of **ALCOA LO-EX**

Personals

E. F. Aylward has been appointed as Sales Manager of the Vision-Visor Corporation, Chicago, Illinois.

Edward R. Taylor has been named Regional Manager of the New York region for the Dodge Division of the Chrysler Corporation. His territory will include

southern New York state and parts of Connecticut, New Jersey, and Pennsylvania. Paul M. Ruef is now Regional Manager of the Kansas City region of the Dodge Division. He will cover Colorado, and parts of Arizona, Kansas, Missouri, New Mexico, Oklahoma, and Utah.

GET YOUR NEW JOHNSON BEARING CATALOG

JUST OFF THE PRESS . . . the new Johnson Automotive Bearing Catalog will bring you up-to-date on sleeve bearings and bushings for all models, old and new. Bigger and better than ever before, it has complete alphabetical, numerical and progressive size listings of main, con-rod and camshaft bearings and, piston pin bushings. This Catalog No. 50-CB is your guide for correct replacement bearings. Write today or mail the coupon for your free copy.



Name _____

Address _____

City _____ State _____

ZONE

Elmer E. Kohl has been appointed General Service Manager of the Oldsmobile Division of General Motors Corporation. He succeeds Harry R. Ekblade, who will undertake special assign-



Elmer E. Kohl

ments from the home office. William J. Buxton, formerly Service Manager in Oldsmobile's Denver zone, will become Assistant General Service Manager.

William A. Blume has been elected Vice-President of the Thermoid Company. Mr. Blume will be in charge of Thermoid's original equipment business for the automotive industry in Detroit, Michigan.

Stanley Kinkor is now heading the expanding sales of automotive parts for Lempeco Automotive, Inc.



Stanley Kinkor

He has been named Vice President and General Sales Manager of Lempeco Products, Inc.

Harry Frankel, announces his resignation from the Chefford Master Manufacturing Company, of which he has been General Sales Manager.

Chilton's MOTOR AGE, NOVEMBER, 1950

*Catch your limit
in cable profits
with*

PACKARD BATTERY CABLES

Battery cable profits won't "get away" from you when you handle Packard battery cable. For the quality is there . . . Packard cables are full size, full weight, and deliver a full measure of value. What's more, you have a choice of LeadAlloy terminal or Leaded Brass terminal . . . fast cranking, quick starting, and maximum battery life are assured. You'll catch your limit in battery cable sales with Packard cable!

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PACKARD BATTERY CABLE IS BEST BECAUSE . . .

Full gauge copper conductor . . . insures delivery of adequate power for quick starting.

Insulation of conductor is accomplished by a heavy sheath of special rubber compound, strong braid and lacquer.

Cadmium-plated "Korelug" attached by 50-ton press is integral part of conductor.

Raised bosses or shoulders for easy spreading of terminal.

Terminals, bolts and thick nuts are all given a special Packard corrosion resistant treatment.

Trade numbers deeply and clearly stamped into Korelug for positive identification.

Reference chart printed on bottom panel of container . . . trade number printed on end panel for quick identification.

FOREMOST BUILDER OF AUTOMOTIVE AND AVIATION WIRING

V-8 Engine Continued from Page 41

provision of full pressure lubrication at all points, including the rocker arms.

Noteworthy feature of the valve train is the adoption of a self-locking type adjusting screw on the rocker arm. This simplifies obtaining valve lash adjustments at assembly and in the field. Valve springs are of conventional type

but are fitted with vibration dampers to maintain proper valve action and reduce noise.

The camshaft, mounted on five steel-back, babbitt-lined bearings, is driven by a gear train consisting of a Celeron gear in mesh with a cast iron gear.

Cylinder heads are designed to be interchangeable right and left,

thus simplifying manufacturing and service requirements. They are suitably water-jacketed to provide complete cooling around the valves. Combustion chambers are machined. 14 mm H-8 Champion plugs are standard, with gap ranging .0325-.0375 in.

One of the major characteristics of the combustion chamber is the clearance between the top of the piston and the top of the cylinder bore. With the current 7 to 1 compression ratio, the piston is stopped appreciably below the top of the cylinder. This clearance space will be useful as a factor in effective progressive increases in compression ratio.

Another interesting feature of cylinder head design is the equivalent of six studs per cylinder to assure secure fastening and freedom from leaks. Studs enter bosses in the wall to provide ample bearing.

Connecting rods are of side-by-side type with an offset of 1/16-in. The lower end bearing is of interchangeable, precision type, steel-back and babbitt lined. Following Studebaker practice the pin is clamped in the rod with a wedge type bolt.

Pistons are cam-ground with a T-slot and full skirt. They are fitted with three rings—two compression rings; one oil ring, the

(Continued on page 76)

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anti-pulsation

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with the **SHOCK ABSORBER DIAPHRAGM**

- Protects carburetor needle valve and float lever against wear
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Better — 6 WAYS



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- Patented spring cushioned diaphragm
- Special alloy non-warp body casting
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Get It From Your Jobber

GARAGE



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Speed SANDING . . . With abrasive discs, Van Dorn Sanders sand fenders and body panels, give a satin-smooth finish preparatory to painting.

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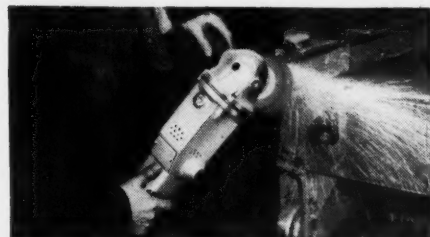
Portable Electric TOOLS

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VAN DORN ELECTRIC SANDERS are a great buy for your shop because they handle such a raft of body jobs. And they do them faster and better to help you make more profits. Their Van Dorn-built universal (AC-DC) motors are *tailor-made* for the tools they drive . . . whether you buy a 7" Special Sander for intermittent service, a 7" Standard for general service or a 7" Heavy-Duty or 9" Heavy-Duty model for more continuous work and greater output.

Easy to handle, built to take it, a Van Dorn Sander is sure to help you turn out body jobs faster, at lower cost. See your nearby Van Dorn Distributor for full details.

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Speed GRINDING . . . With saucer grinding wheels, Van Dorn Sanders smooth welds and casting ridges; do faster, smoother grinding in many general applications.



Speed WIRE BRUSHING . . . With husky "Whirlwind" wire cup brushes, they remove old paint, rust, scale and road tar; remove dirt from under fenders.

V-8 Engine Continued from Page 74

latter being of steel inner ring design.

The carburetor is a 1 $\frac{1}{8}$ in. Stromberg of dual downdraft type. A major feature of the induction system is the development of individual porting in the intake manifold, providing a single independent branch to each cylinder.

Considering the new V-8 engine

and other mechanical changes to be noted, the 1951 line features many noteworthy improvements from a design standpoint. Among the major changes are the details of the suspension system. For one thing the new models boast the adoption of four-leaf 2 $\frac{1}{2}$ -in. width semi-elliptic rear springs, interchangeable on all chasses.

The wide springs have greater lateral stability, making possible the elimination of the rear sway bar on the Champion and Commander, weigh less than conventional multiple-leaf springs, and are said to give a better ride.

Direct acting shock absorbers, used on the Champion heretofore, now are standard on Commander and Land Cruiser chassis, with sea-legs mounting at the rear. As a design improvement the upper and lower arms of the front suspension on all models is now a one-piece stamping.

The Champion engine remains basically unchanged but has been fitted with a new oilpan to provide clearance for centerpoint steering which is standard on all models in 1951. The Champion also offers the Studebaker automatic drive as optional equipment.

Centerpoint steering is standard on all models. In addition, on the Commander steering ratio has been increased with a new Ross cam and twin lever gear for greater ease in parking.

Weight reduction has been effected in the Commander and Champion chasses, and brake size has been correspondingly decreased at the rear. The Commander now has 11 x 2 in. brakes at the front, 9 x 2 at the rear. The Champion has 9 x 2 in. brakes both front and rear. Studebaker continues the use of Wagner Electric hydraulic brakes of self-centering, self-adjusting type. Brake loading on the Commander is 62 per cent at the front, 38 per cent at the rear. On the Champion it is 57 and 43 per cent.

Spicer semi-floating rear axles are of the same basic design as before but are entirely new because of the introduction of a new differential carrier capable of accommodating a wider range of gear ratios. The range of ratios is as follows:

Automatic transmission — 3.54 to 1.

Standard transmission gear ratio — 4.09 (Commander), 4.1 (Champion).

Overdrive transmission gear ratio — 4.56 to 1.

SOME PARTS MUST BE PROTECTED AGAINST MOISTURE

NO MOISTURE CAN EVER REACH CONDENSER WINDING

CONNECTOR EMBEDDED IN NEOPRENE

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NOW! Cut air-service costs and still maintain accurate gauging on *all* your air lines. Get your Schrader Kit for airlines that do not have gauges, or for lines where your gauging equipment and devices are not functioning. Keep your gauge handy . . . where you need it—when you need it! No more lost or strayed gauges! And more important—with this low-priced kit, you can afford to change gauges as often as you

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GAUGE—INFLATE—GAUGE! That's the key to improved tire maintenance that takes but a few minutes of your time and leads to increased customer confidence. An important part of your tire-air service is the maintenance of accurate gauging devices. The complete line of Schrader Gauges, Chucks, and Chuck Gauges is the answer. Check into these quality air instruments—replacement with Schrader Products costs less than you think.

Schrader #4718K Gauge Clamp Airline Kit and Two Schrader #5050 gauges (calibrated 10-50 lbs. in one lb. units). It's a bargain at only \$2.95 (Dealer U.S.A.). Keep all your airlines profit lines! Order all the Kits you need from your Schrader Supplier.



Schrader

PRODUCTS
CONTROL THE AIR

A. SCHRADER'S SON

Division of Scovill Manufacturing Company, Incorporated
BROOKLYN 17, NEW YORK

Pressure Tests Continued from Page 44

rpm). With the selector lever in "D" range the pressure should be 75 to 100 lbs. and may be as low as 70 lbs. without causing trouble. 6. With the selector lever in "L" range, the pressure should be 160 to 200 lbs. 7. Shut off the engine and remove the gage from the low servo outlet located at the bottom of the transmission case at the

right. 8. Run the engine at idle (400 to 425 rpm). Take an idle pressure reading which should be 125 to 159 lbs. with selector lever in "R" range. Apply the brakes to lock the rear wheels and increase engine stall speed (1560 to 1610 rpm). With the selector lever in the "R" range the pressure should be 160 to 200 lbs. 9. Shut


off the engine and raise the rear wheels clear of the floor. 10. Remove the pressure gage from the outlet on the bottom of the transmission case at right rear and install to rear pump outlet provided on the right side of rear transmission face. 11. Start the engine and with the lever in the "D" range, speed up to obtain 30 mph road speed. Pressure of the rear pump should be 50 to 75 lbs. Place the lever in the "L" range at a road speed of 30 mph. The rear pump pressure should be 140 to 180 lbs.

In road testing the car for operation on down shift from "D" to "L" range at 40 mph with the foot off accelerator, a definite tire chirp should be heard at the time of the down shift. If this chirp is not evident, or if the engine runs away, it indicates trouble in the accumulator or modulator line.

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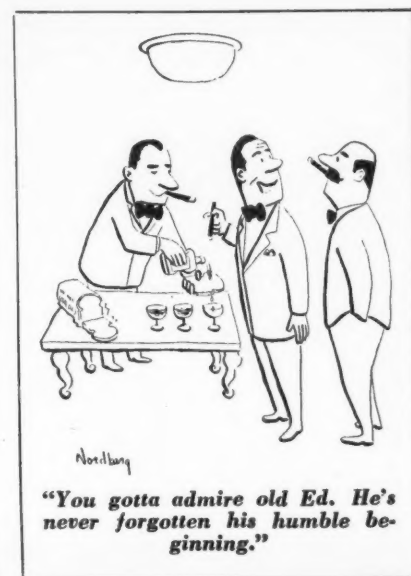


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PAR COMPRESSOR DIVISION
TOLEDO, OHIO

1951 Hydra-Matic

Hydra-Matic transmissions on 1951 automobiles will show a definite improvement in reverse gear shifting. Shifting into reverse on the current Hydra-Matic sometimes is not accomplished as readily as the designers would like and changes have been made in the mechanism to overcome that objection. With improved reverse gear selection the owners of Hydra-Matic transmissions will be able to rock the car in mud and snow.





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Clean out all cylinder head carbon FAST with SKIL Drills equipped with Rotary Carbon Cleaning Brushes. There's plenty of power to remove the hardest scale. Get into cylinder head corners with complete ease. You'll find SKIL Drills easy to use because they're light. Extra power makes them faster . . . extra toughness makes them last longer.

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Rugged construction and aircraft type insulator combine to give lower cost per mile of spark plug operation... built to take it... another Auto-Lite original factory product.

AUTO-LITE SPARK PLUGS

This line is unmatched... and Auto-Lite is the best advertised name in the automotive after-market. Only Auto-Lite offers dealers the top-rated "Suspense!" show on radio every week and TV every week...

the famous "spark plugs look alike, too" campaign in national magazines and newspapers... promotion program for dealers and jobbers... all designed for greater sales. Ask your jobber's salesman, or write to

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The new Auto-Lite Bull's Eye Lamp concentrates the stray light into the main driving beam. Factory focused. Sealed under 9,000 pounds per square inch pressure. This new lamp will operate even when lens is cracked or broken. Offers you advantages for more sales. Original factory equipment on many leading cars.

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The new Silver Line is a complete line—featuring silver sheath Steelductor Spark Plug Wire, Flexstrand Primary Wire and battery cable with the new power-line terminal that holds tight. Top quality. Beautifully packaged to sell on sight.



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The Best Advertised Name in the Automotive After Market

ment, massive front and rear bumpers of different design, and unique treatment of lamps front and rear. Interior trim also features new hardware items.

Incident to the various changes incorporated in 1951 models, total car weight has been increased by some 55 lb. in most models.

Due to the larger glass areas at

the rear and quarter panel, rear body cross sill members have been reinforced to provide for greater rigidity of the structure.

From a mechanical standpoint the Mercury chassis and power train remains substantially the same. The engine is the same in most respects but has many noteworthy improvements. Steps have been taken to

provide an even more sensitive balance of the crankshaft while all main bearings are assembled with selective fits. With improvements in cylinder block materials it has become feasible to eliminate valve inserts for intake valves, retaining inserts for exhaust valves. The fuel pump has a double-acting vacuum booster of increased capacity to improve windshield wiper operation.

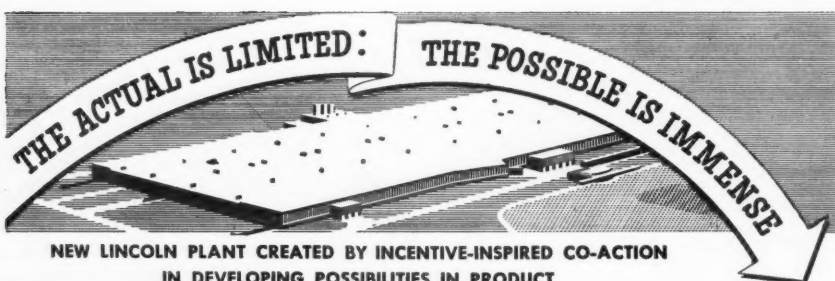
On the camshaft the cam profile now has a triple ramp to reduce noise. Automatic choke operation has received unique treatment. By locating the thermostatic element on the manifold, choke operation is controlled by engine temperature rather than under-hood temperature. This prolongs the period in which fast idle remains inoperative after the car has been parked for a short interval.

Another interesting feature is something akin to an anti-stall device. This consists of a fitting screwed into the carburetor body on cars fitted with automatic drive. Its function is to slow down the closing of the throttle valve automatically and thus has the effect of preventing the engine from stalling during parking maneuvers or on fast stops in traffic.

Although the engine is unchanged in specifications, output has been increased to 112 bhp from the previous 110 bhp through the refinements outlined here.

One of the entirely new features of the engine is the introduction of a larger separable cast iron bell housing for both standard and auto-

(Continued on page 84)



NEW LINCOLN PLANT CREATED BY INCENTIVE-INSPIRED CO-ACTION IN DEVELOPING POSSIBILITIES IN PRODUCT

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LINCOLN "FLEETWELDER"**

"Fleetwelder's" automatic arc starting permits even the inexperienced welder to make strong, high-quality welds in the shortest time . . . at the lowest cost. Greater range efficiently handles electrodes from $\frac{3}{16}$ " to $\frac{1}{4}$ " for light body work . . . to heavy frames and axles.

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 Sales Offices and Field Service Shops in All Principal Cities



KOPPERS K-SPUN

gives you

NEW LIFE

IN 2 WAYS!



NEW LIFE FOR YOUR RERING JOBS!

Better jobs, fewer comebacks, more satisfied customers, bigger profits—because Koppers K-Spun Piston Rings are twice as strong as ordinary rings; have 50% more spring, four times greater resistance to combustion shock; are guaranteed against breakage for the life of the engine—due to unique centrifugal casting method!



NEW LIFE FOR ALL YOUR SALES!

Koppers great 1950 Advertising and Merchandising program—because it sells motorists on you as the Mr. Big of automotive service, boosts your know-how, your reputation for fine, economical service—with powerful advertising in The Saturday Evening Post, Time and Newsweek, colorful consumer booklets, eye-catching engine overhaul chart and specification wall hanger, attention-getting mechanics' caps, hard-selling newspaper ads!

SO, FOR GREATER CONSUMER RECOGNITION,

more business and profits, order Koppers K-Spun Rings from your Koppers American Hammered Jobber today! Engineered sets for all makes of cars and trucks.

There is profit, too, in piston resizing. Your Koppers Jobber has exclusive, patented KOETHERIZING which expands a set of pistons in less than five minutes, with permanent precision, at less than a dollar per piston!

KOPPERS COMPANY, INC., Piston Ring Dept.,
Baltimore 3, Maryland.



matic transmissions, adding considerably to structural rigidity. The clutch remains the same but the standard synchromesh transmission is completely new. It has a different transmission case and new gearing featuring what is termed a balanced tooth design. Although gear ratios are unchanged, gear teeth are of coarser pitch and the durability of

the gear box in general is said to be better than double the life of the former unit.

For 1951 Mercury offers the Merc-O-Matic drive as optional; the conventional three-speed synchromesh transmission as standard; and overdrive optional. The axle remains the same except for a new gear and pinion set having a larger

number of teeth to improve quietness. The set-up of axle gear ratios is as follows:

Standard transmission . . 3.91 to 1
Automatic drive 3.31 to 1
Overdrive 4.27 to 1

It is of interest too that the rear engine mount, i.e., the mount at the rear of the transmission has been changed, now is of the same design as in Ford cars. At the same time the frame cross member under the transmission has been made removable to facilitate servicing of transmissions.

It will be recalled that the Merc-O-Matic drive is air-cooled, taking in air through a scoop on the left hand side of the bell housing and exhausting on the opposite side. At the same time the radiator core with automatic drive is of larger capacity to afford better cooling of the engine. The fan too is larger, has four blades arranged asymmetrically and with curved tips.

Other changed mechanical details include a revision of the tail pipe to clear the new bumper and revision of the filler neck incident to the new rear fender design. Another significant change is that sedan rear springs now will be fitted on coupe models as well, in keeping with the current practice of heavier loading of the latter models.

On automatic drive models the brake pedal is considerably wider, facilitating left foot operation if desired.

Interior treatment includes a new steering wheel and instrument panel knobs of unique design. The ventilating system has been improved by providing individual controls for the ducts on each side.

Motorcycles

An American motorcycle speed record of 156.71 mph was established recently by Roland Free, of Los Angeles. He drove a British made Vincent cycle on the Bonneville Salt Flats.

AAR

The Automotive Affiliated Representatives have adopted a new association emblem. The new lapel button, white enamel and blue background with gold lettering, will be seen at the Automotive Service Industries Show and thereafter.

STORM-VULCAN

SAYS "THANK YOU...MR. JOBBER"

Your outstanding acceptance of STORM-VULCAN Automotive Engine Rebuilding Machines has made the success of this company. The line's steady growth and your continuous demand is convincing proof, beyond dispute, of merit and value.

Rather than rest on this record of achievement, STORM-VULCAN continues its progress in building greater precision machines for higher production work.

So, in saying "thanks" to the thousands of present customers, we promise you...and future customers...the finest in Engine Rebuilding Equipment at the lowest possible cost.

May we have the pleasure of thanking you in person at the ASI Show?

BOOTHS
A-368-376

ARTIE L. BARNETT
LEE D. TUTTLE
T. LARRY KIDD



STORM VULCAN
INCORPORATED
2504 COMMERCE ST., DALLAS, TEXAS

LOOK HOW
Snap-on
ROLLA-BENCH
Sells
Service
at IDLE MOTORS, INC.
RIVER GROVE, ILL.



**William J. Mayer, Idle Motors
Service Manager says:**

"A MECHANIC EQUIPPED with



For 30 years, Snap-on's Direct-to-User tool service has proved to be "The Time-Saving Way to buy Time-Saving Tools."



HAS A BETTER CHANCE!"

... "because," continues Mr. Mayer, "we know he takes pride in owning tools of quality, and he is the type of man we want. We have found that the Snap-on Rolla-Bench saves our men time on each job. A good mechanic can be judged by his tools and tool cabinet."

These pictures of the magnificent, new quarters of Chrysler-Plymouth IDLE MOTORS, room for 40 cars, carry Mr. Mayer's thoughts further than "judging a good mechanic by his tools and cabinet."

Here is service displayed with showroom importance—spotlighted so CUSTOMERS, too, say, "Here are good mechanics—here are folks to keep me on the road!"

No matter how small the shop, it's always big enough for the best ad for service that anyone can buy—modern Snap-on Tools in a striking-looking Snap-on Rolla-Bench!

Figure it out with your Snap-on man. Branch sales offices in 41 principal cities.

SNAP-ON TOOLS CORPORATION
8036-K 28th Ave., Kenosha, Wis.

Write for 104-page Catalog

it would run at all."

Pop's genial deep voice broke up the row. "Nice choice of words, Tommy," he grinned. "But few cars get fixed by talking about 'em."

"An' if it wasn't for me, very few cars would get fixed around here at all," put in Larry pointedly.

"Since you don't need me," said

Pop mildly. "I will take my advice elsewhere."

"Stick around a minute," Larry said grudgingly. "I like to give the Boss a chance to earn his keep." He explained to Pop what had happened. Pop turned to Tommy.

"How did the car act when you took it in?"

"Fine," answered Tommy. "So good that I wondered why Mr. Grayson had trouble starting this morning. I knew it would only need minor adjustments and new points and plugs of course."

"Did you put them in?"

"Sure," said Tommy. "And a new condenser, too."

"Uhuh," Pop scratched his balding head reflectively. "Start her up." He listened to the sputtering engine for a few minutes then a grin of satisfaction spread over his ruddy face. He motioned to Tommy to turn the key. He took the distributor out and over to the test bench. He flipped the cap off the distributor and removed the screw which held the new condenser in position. "Where's the lock washer?" he asked.

"Now Pop," Larry protested. "Maybe the kid should have put in a lock washer, but that wouldn't affect the engine"

"No," Pop agreed. "Usually it wouldn't. But on some of these replacement condensers the screw is a trifle too long and is apt to interfere with the automatic advance. When Tommy left out this lock washer he practically insured that this screw could reach far enough down to upset the apple cart. And it did."

He turned to Larry. "Just to be on the safe side grind a bit off the screw before you put it back."

Larry turned to Tommy and handed him the screw. "And don't forget to use a lock washer this time either." "It's the kid's job," he explained to Pop. "I've got work of my own to do."

"You know, Larry," Pop replied. "Sometimes you remind me of Aggie."

"Who?"

"She was a hired girl my mother had once. She didn't turn out too well and we had to tell her that she could pick up her wages at the end of the week. She was windin' the clock at the time and set the key down quick."

"'Aggie,' said my mother. 'You know that's an eight day clock but you've only turned the key twice. Why it will run down by Sunday.'

"'That's right,' said Aggie, cheerfully. 'But you can't expect me to do the new girl's work.'"

MAKE 3 WAY PROFITS... Starting NOW!

with
COMBINATION SERVICE MASTER

HYPRESSURE Jenny

and STEAM THORO-PURGE





1. CLEANING COOLING SYSTEMS with Steam Thoro-Purge

... right now, when three of every four cars on the road need radiator and motor block reverse-flushing. Thoro-Purge does it *fast . . . thoroughly . . .* without mess or bother . . . brings *new customers* in . . . makes you **EXTRA MONEY**.



2. DOING AUTO CLEANING JOBS with Hypressure Jenny

Cash in on dozens of **EXTRA-PROFIT SERVICES** such as cleaning motors . . . chassis . . . springs . . . grille work . . . preparing cars for undercoating. Hypressure Jenny does 'em fast and thoroughly . . . builds your business . . . **BOOSTS YOUR INCOME**.



3. SPEEDING REPAIR JOBS

Cleaning first with Hypressure Jenny saves up to 40% of your mechanics' time on repair jobs. Hypressure Jenny also saves time, labor, and money cleaning tools, lifts, pits, floors, walls, driveways, windows, etc., 10 times faster than by hand labor . . . Adds to your **PROFIT**.

GET THE FULL STORY, New Booklet "1001 WAYS TO EXTRA PROFITS" sent FREE. Write for it today—NOW!



HYPRESSURE JENNY DIVISION
HOMESTEAD VALVE MANUFACTURING CO.
"Serving Since 1892"

P. O. BOX 95 CORAOPOLIS, PA.

BIG PROFITS IN TURN SIGNALS!



Feature the New
ALCO TURN SIGNAL
CONVERSION KIT
with the Automatic
SELF-CANCELLING SWITCH
FOR FRONT AND REAR LIGHTS

**ADDS DIRECTIONAL
SIGNALS TO PRESENT
FRONT AND REAR LIGHTS**

Quick and simple to install. No holes to drill. Socket conversion units are exact duplicates of manufacturer's standard equipment. Colored connecting wires with snap-in tips assure easy identification. ALCO's self-cancelling switch automatically cuts off the signal after the turn has been made. Can also be operated manually.

CUSTOM BUILT TO FIT MOST POPULAR CARS

Each KIT contains:

AUTOMATIC SELF-CANCELLING SWITCH,
SOCKETS, BULBS, FLASHER, INLINE FUSE,
ALL NECESSARY WIRING

STATE APPROVED

STANDARD SWITCH of baked enamel on die cast body with chrome handle.

DE LUXE SWITCH highly polished all chrome.

ALCO DIVISION OF

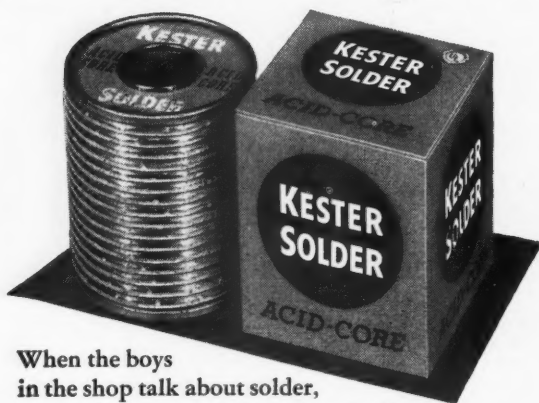
AUTO LAMP Manufacturing Co.

2909 Indiana Ave., Chicago 16, Ill.

SOLD ONLY THROUGH AUTHORIZED JOBBERS

ALCO

Kester Solder



When the boys
in the shop talk about solder,
they talk about Kester Acid-Core Solder;
the old reliable product now in a new package.

Easier to Use

Mechanics know that using Kester makes any soldering job easier. Kester contains more grade A newly mined Tin—40%—and only virgin lead, too. The fluxes are chemically and scientifically correct.

Faster

Kester is faster to use. Mechanics prefer it and are more satisfied when using it. The work is speeded up and output is increased.

Kester Solder Company
4201 Wrightwood Ave., Chicago 39
Newark, N. J. • Brantford, Canada

**KESTER
SOLDER**



The Mechanics Standard since 1899

Calendar of Coming Events

Nov. 13-15—Automotive Trade Assn. of Virginia Convention, John Marshall Hotel, Richmond, Va.

Nov. 15-16—Oklahoma Automotive Dealers Assn. 17th Annual Meeting, Tulsa, Okla.

Nov. 30-Dec. 1—Arizona Automobile Dealers Assn. Convention, Phoenix, Ariz.

Dec. 1-2—Montana Auto Dealers Assn. Convention, Rainbow Hotel, Great Falls, Mont.

Dec. 4-5—Idaho Automobile Dealers Assn. Convention, Hotel Boise, Boise, Idaho.

Dec. 4-8—Automotive Service Industries Show, Navy Pier, Chicago, Ill.

Dec. 7—Utah Automobile Dealers Assn. Convention, Newhouse Hotel, Salt Lake City.

Jan. 7-10, 1951—National Auto Dealers Assn. Convention and Exhibition, Miami, Fla.

Jan. 25 to 28—Fourth Annual Nat'l Hot Rod and Motor Sports Show, Los Angeles National Guard Armory.

Jan. 27-Feb. 3—Milwaukee County Auto Dealers Assn. Show, Milwaukee.

Feb. 4-10—Greater St. Louis Automotive Assn. Show, Arena, St. Louis.

Feb. 15-22—Philadelphia Automotive Trade Assn. Show, Commercial Museum, Philadelphia.

Feb. 17-25—Chicago Automobile Trade Assn. Show, International Amphitheater, Chicago, Ill.

March 2-8—Greater Kansas City Motor Car Dealers Assn. Show, Municipal Auditorium, Kansas City, Mo.

March 10-18—Seattle Auto Dealers Assn. Show, Field Artillery Armory, Seattle, Wash.

March 17-25—Indianapolis Automobile Trade Assn. Show, Cattle Exposition Bldg., State Fair Grounds, Indianapolis, Ind.

March 21-24—Pacific Automotive Show, Civic Auditorium, Seattle, Wash.

April 26-29—Southwest Automotive Show, Oklahoma City, Okla.

May 30—Sept. 9—World Transportation Fair, Santa Anita Park, Arcadia, Calif.

May 31-June 2—Washington State Auto Dealers Assn. Convention, Winthrop Hotel, Tacoma, Wash.



"What happens if the car decides to shift before I'm ready to go?"

**You can stake
your reputation on
PERFECTION**

PRECISION FIT

Speeds up your PROFITS!

Perfection Replacement Parts are precision made and carefully burished to "no tolerance" exactness to fit perfectly at every replacement job. They mesh perfectly . . . even with unworn parts that need not be replaced. You will find that you can turn out better jobs faster at greater profit with "pre-fitted" Perfection Parts.

PERFECTION RING GEARS and PINIONS are perfectly mated, lapped and packed in sets for absolute accuracy and efficiency in service. They provide long-lasting, smooth performance.

PERFECTION TRANSMISSION GEARS undergo continuous, close tolerance testing throughout every step of manufacture to assure the perfect fit and function that helps build your service reputation. They offer you greater profit and your customers greater service.

There is a Perfection wholesaler near you who carries a representative stock of these quality parts. He is prepared to render prompt, efficient, friendly service. If you do not know his name, write us.

PERFECTION GEAR COMPANY, HARVEY, ILL.

Chilton's MOTOR AGE, NOVEMBER, 1950



PERFECTION PRODUCTS INCLUDE:
 Silent Timing Gears • Metal Timing Gears • Silent Timing Chains • Clutch Plates • Transmission Gears and Parts • Differential Ring Gears and Pinions • Differential Cases and Parts • Fly Wheel Gears • Cylinder Heads • Clutch Cover Assembly Parts • Pressure Plates • Clutch Forks and Parts • Clutch Rebuilders

finishing the entire area again. For glass and bare metal parts, a product is available which saves valuable masking time. It is supplied in semi-liquid form and should be used only on glass and smooth chrome surfaces. It can be peeled off in large pieces or sheets when the job is finished. Masking tape should be used on other metal surfaces, rub-

ber or plastic. Remember that the time saved in a quick masking operation does not approach the time lost in correcting overspray or bare spots.

After the bare metal has been prepared, spray the area with primer surfacer. Rusting sets in rapidly and every minute counts. Apply three or four coats of primer

surfacers over the bare and repaired areas, allowing each coat to flash (become dull) before the next coat is applied. The last coat of primer surfacer should be dried before it is sanded or puttied. Sand the surface with a fine grade of wet sandpaper and water. If, after sanding, any file marks or pits still show, knife them out with glazing putty. Allow the putty to dry for at least one hour and then sand the section with wet sandpaper and water.

Next, apply a good quality sealer, thinned to the manufacturer's specifications, over the entire area to be painted. The sealer prevents "bleeding through" of the old paint, "sinking in" of the finished paint and allows maximum "hold out" of the color coat. Be sure that the primer surfacer has been sanded until it is completely smooth before applying the sealer, since sealer should not be sanded.

Another point worth remembering is that paint should be thoroughly stirred before using. If the pigment and vehicle are not mixed completely, the resulting color will be off shade and may not adhere properly.

Up until this point, preparation has been the same, whether the job is to be lacquer or synthetic enamel. However, with color coats, certain differences in applications will arise. For instance, higher air pressure should be used with synthetic enamel than with lacquer. The enamel should be applied at 60 to 70 lbs., while lacquer generally re-

(Continued on page 92)



AIRCO'S new small cylinders

**Yours for leasing for 25 years (estimated lifetime)
at average cost of \$2.00 per year**

Here, at last, is the ideal cylinder team to meet every day welding and cutting operations — a 122 ft. oxygen cylinder teamed with a 60 ft. acetylene cylinder. This combination gives you

THESE 4 BIG ADVANTAGES

1. **Better Gas Ratio** — meets the common demand for 2 to 1 oxygen-acetylene ratio.
2. **Easier Handling** — small, lightweight cylinders easy to move around the shop . . . or on your truck for field welding jobs.
3. **Greater Economy** — your savings on demurrage can amount to \$5.20 or more per year. Airco makes ordinary wear and tear repairs and retests these cylinders at no charge to you.
4. **Always Available** — and when your cylinders are empty, you get a pair of full ones immediately . . . no valuable time lost waiting for cylinders to be filled.

Moreover, if you move your place of business, one of Airco's nation-wide network of dealers and plants will always be near to service your small cylinders.



This Emblem identifies
your Airco Dealer

AIR REDUCTION

Offices in Principal Cities

Plus a Nationwide Dealer Organization

Headquarters for Oxygen, Acetylene and Other Gases . . . Calcium Carbide . . . Gas
Cutting Machines . . . Gas Welding and Cutting Apparatus, and Supplies . . . Arc
Welders, Electrodes, and Accessories

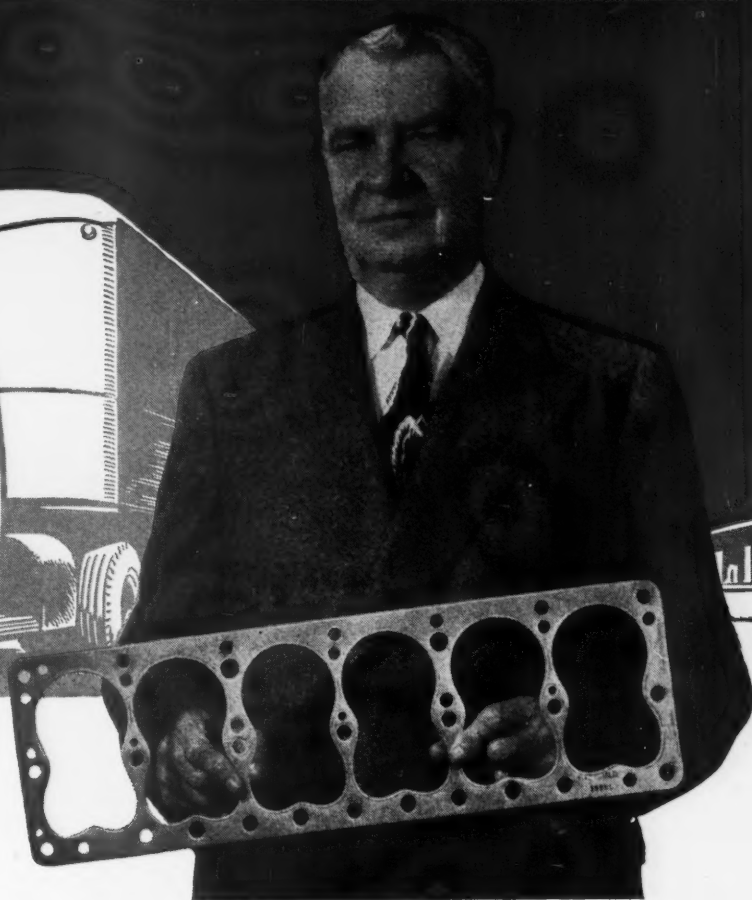


Ask your local authorized Airco Dealer about the 25-year lease plan on these small gas cylinders. Also ask him about his complete line of gas and arc welding equipment and supplies that he can deliver immediately from stock. Do it now! Call him today.

TUNE UPS



"You ever hear such rhythm in a motor?"



"At the ASI Show In Chicago, let's talk about

FITZGERALD Metallic Aluminum-Fused-Oxide Steel Asbestos GASKETS*

SAYS P. J. FITZGERALD

We've been making different types of gaskets to meet different needs ever since the automotive industry was in its infancy. Fitzgerald Metallic Aluminum-Fused-Oxide Steel Asbestos Gaskets* are different from others because they were developed to meet the special needs of today's high compression engines . . . greater strength, higher resistance to heat and corrosion.

If you attend the Automotive Service Industries Show in Chicago next month you'll find our exhibit in Booth B-53-55-57. I'll be there a good part of the time and I'd like to tell you in person how well these new gaskets of ours are performing.

Incidentally, franchised distributorships are still available to qualified jobbers in a few areas. If you'd like more information, drop me a line.

*Service Mark Registration Pending

President

THE FITZGERALD MANUFACTURING CO.
Torrington, Connecticut

SECTION A—A
.002"-.003" THICK
FUSED ALUMINUM OXIDE

ELECTRICALLY
ANNEALED STEEL

ASBESTOS

.002"-.003" THICK
FUSED ALUMINUM OXIDE

A—A

GREASE RETAINERS — CORK GASKETS — FITZ-RITE
 TREATED FIBER GASKETS FOR OIL, GASOLINE
 AND WATER CONNECTIONS
 COMPLETE SETS FOR MOTOR REBUILDERS

FITZGERALD
gaskets
 SINCE 1906

Paint Jobs Continued from Page 90

quires only 45 to 50 lbs. depending on equipment used and atmospheric conditions.

Proper handling of the gun is essential to good painting. Hold the gun directly out from the spot that is being painted. Don't shoot up, down or to the side. Move the gun at right angles to the panel, the pattern then will be oval shaped and

even. Don't move the wrist, use an arm motion. This will keep the gun at the same angle with the work. When spraying lacquer, hold the gun six to eight inches away from the work. With enamel, hold the gun eight to twelve inches away. It's a good idea to spray a test pattern on a piece of cardboard before commencing, to see if you're getting

the correct shape, and if the nozzle is correctly adjusted. If you're doing all types of work, in which you encounter both lacquer and enamel, the general purpose tip is satisfactory since it can be readily adjusted. The liquid adjustment is turned in, giving a lighter mixture for lacquer work; and out, giving a heavier mixture for working with enamel. Also, special nozzles are available which are specifically designed for use with either lacquer or enamel. Of course, separate guns for lacquer and enamel will save a lot of time, for a shop which does a fair volume of work in both lacquer and enamel. Unless the gun is thoroughly cleaned between uses of these paints, gumming of the nozzle may result. Follow carefully the manufacturer's specifications on thinning and application of both lacquers and synthetic enamels. When applying enamels, the air must be free of dust and dirt, since this material dries much more slowly than lacquer. While lacquer is hard as soon as the thinner evaporates, enamel has in addition an oil which oxidizes slowly before the surface becomes completely hard. Another way in which lacquer and enamel differ in application is that the average enamel job requires only two coats, while lacquer usually requires four to six coats. Also remember that a better job can be obtained when spraying lacquer if the coats are applied thin. With synthetic enamel a light tack coat, followed by a full coat usually does

(Continued on page 94)

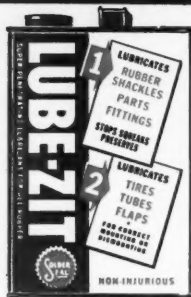
4 MORE LEADERS

SOLDER SEAL



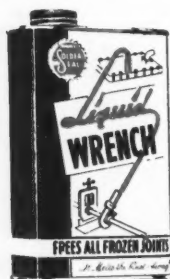
IGNITION SEAL

Prevents motor downturns and protects the entire electrical system. Assures quick starting in wet weather. Saves battery and fuel. Easy to use, easy to sell.



LUBE-ZIT

Very popular dual-purpose product lubricates and prolongs the life of all rubber parts of the car — and assures proper mounting of tires, tubes and flaps.



LIQUID WRENCH

World-famous super penetrant which instantly frees all frozen parts. Indispensable around service stations and garages. "It melts the rust away."



TITeseal

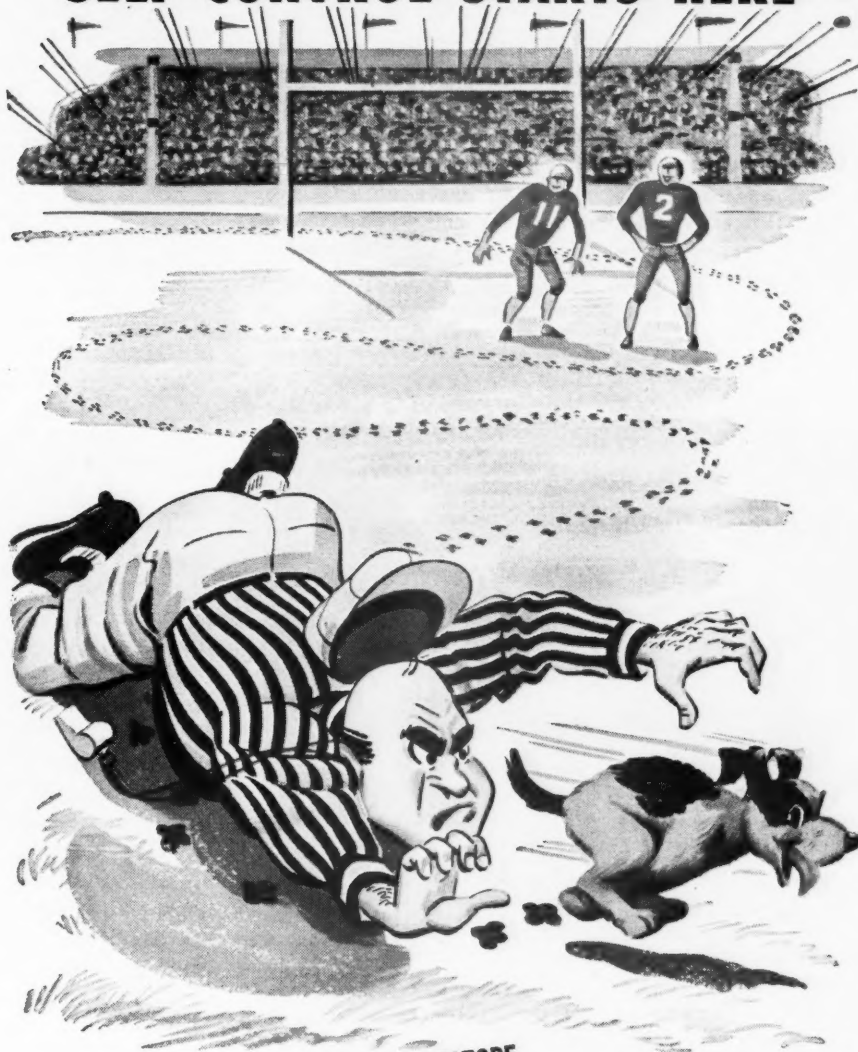
Unexcelled gasket and joint sealing compounds meet every automotive and aviation requirement for pressure-tight and leak-proof seals. All popular types available.

"Get it from your Jobber"

RADIATOR SPECIALTY COMPANY
CHARLOTTE, NORTH CAROLINA
MAKERS OF CHEMICAL AND RUBBER SPECIALTY PRODUCTS



SELF-CONTROL STARTS HERE



AND TO RESTORE
ENGINE PERFORMANCE

OIL-CONTROL STARTS HERE

To Stop Oil-Pumping, Replace Worn
Engine Bearings

A frisky pup, out of control on the field during the Big Game, draws laughs as well as groans. But worn engine bearings, losing oil control, are *never* a laughing matter. They let excess oil reach combustion chambers. It burns to carbon, fouling pistons, rings, valves and spark plugs. *Performance goes up in smoke!*

Don't blame the piston rings for oil-

pumping caused by worn engine bearings. Give the rings a chance to do their own job—check for worn bearings, too! Replace in sets with Genuine Federal-Mogul Bearings, *engineered* for the job of oil control!

FEDERAL-MOGUL SERVICE

(Division of Federal-Mogul Corporation)
DETROIT 13, MICHIGAN



control oil-pumping where it starts—REPLACE WITH

FEDERAL-MOGUL



BEARINGS

Paint Jobs Continued from Page 92

the best job. The light coat reduces the tendency to sag. However, be careful not to go too heavy on the second coat so that the combined coats will not run or sag. Application of metallic enamels requires the first procedure. A full coat first, followed by a light coat will produce even distribution of the metallic particles.

Opinions vary with regard to the proper number of coats required for a good lacquer job. However, this is assured—too many is better than not enough. You're guaranteed a good job by applying at least two double coats. A double coat means this: First, spray vertical strokes over an area and then across with horizontal strokes. When this is

followed by two to four single coats, the finish will be substantial. Then go on to give the surface a final mist coat consisting of a rich thinner to which is added a small amount of color. This, applied as the final coat, increases the flow-out and gives the job higher lustre and better depth.


After the final coat has been thoroughly dried in an oven, with drying lamps or with air, the surface is ready for compounding. (This applies only to lacquer, since enamel should never be compounded. Compounding enamel will only dull the finish.) Power equipment really pays off in compounding and polishing. With a power buffer you can use an extremely fine abrasive which produces a smooth finish without scratches. Naturally, caution should be exercised when working with this type of equipment, as excessive pressure or leaving the machine on one spot too long can damage the finish. When power compounding, thin the compound to a creamy consistency and spread it on the surface. Then travel the machine over the treated areas, overlapping each stroke. Allow only one side of the bonnet to contact the surface. If the compounding is done by hand, use soft, clean cloth. In this case apply the compound to the cloth rather than to the surface, as the cutting action will be more even.

Be sure not to compound the finish until it is well dried, since the compound will become imbedded in the paint and reduce the lustre. Synthetic enamel jobs should not be compounded and should be allowed to harden for at least 30 days before waxing or polishing. Lacquer, however, can be polished as soon as it has been compounded. But again, wait 30 days before waxing or polishing.

The refinishing job as described here, should result in satisfaction for the customer and repeat business for the shop.

M.E.W.A.

Theme of the Motor and Equipment Wholesalers Association's Annual National Business Conference will be "Operating a wholesaling business under today's conditions." The meeting will be held December 1 and 2 at the Stevens Hotel, Chicago.



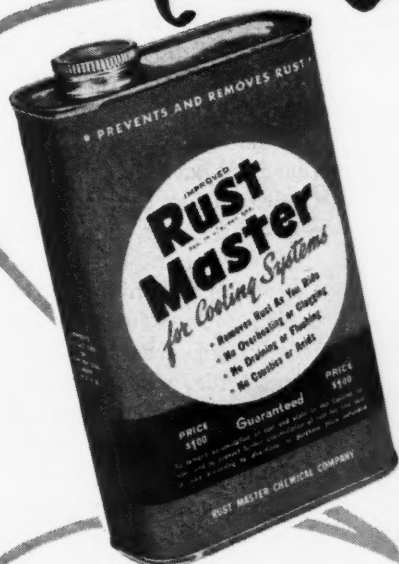
ong ago — as early as 1904, Wohlert set up a policy of standardization in Automotive Parts Manufacturing and supplying for both original equipment and replacement parts users.

This policy incorporating the selection of only best materials, fine workmanship and fair pricing has been rigorously adhered to for nearly half a century in good and bad times alike.

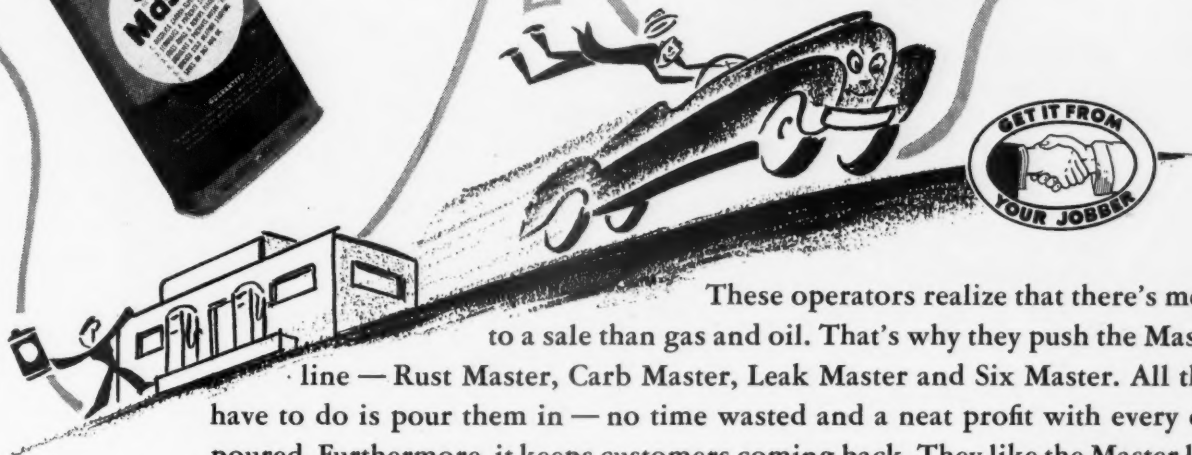
Through depressions and 2 World Wars Jobbers and Dealers have found profit and security in the dependable Wohlert line of over 5,000 Engineered items.

Wohlert Corporation
Lansing 5, Michigan

Call it luck



Some service stations, car dealers and garages make a lot more money than others. And some folks say they're lucky. Actually, they're not lucky, but smarter.



These operators realize that there's more to a sale than gas and oil. That's why they push the Master line — Rust Master, Carb Master, Leak Master and Six Master. All they have to do is pour them in — no time wasted and a neat profit with every can poured. Furthermore, it keeps customers coming back. They like the Master line because each product is *guaranteed* to do the job better than anything else on the market.

**NO FUSS — NO MUSS
JUST POUR — NO MORE**

The "BIG 4" in AUTO CHEMICALS

RUST MASTER — Eliminates cooling system rust and scale while driving — gives complete protection for a whole year. No need to drain or flush.

CARB MASTER — Completely dissolves carbon-sludge and gum from the carburetor without removing or dismantling it. Eliminates moisture in the fuel system — prevents gas line freeze-ups. Ideal bench cleaner.

LEAK MASTER — New, improved patented stop-leak. Harmless to all metal or rubber. Retards rust and improves water circulation.

SIX MASTER — The perfect motor conditioner. Dissolves carbon-sludge and gum, thus increasing power and pick-up. Saves on battery and on gas and oil consumption. Excellent crank case anti-freeze.



PRODUCTS WORK WHILE YOU RIDE

Chemical Company
Mfg. Chemists

56 CREIGHTON ST., CAMBRIDGE, MASS.

THE SILENT PARTNERS OF MOTOR EFFICIENCY

Spring Service Continued from Page 45

replaced in pairs. This is so that the front of the car may be kept level and steering alignment maintained. Even though the other spring may be of the same height as the new spring, it is possible that the new spring may take a different initial sag in service, because coil springs cannot be pre-set when manufactured.

Before checking for sag of coil springs, the car should be "jounced," both front and rear, to be sure that there is no binding in the shock absorbers or suspension units and that the car is sitting in its normal rest position. Then measure the distance specified by the manufacturers. In the case of Pontiac, as shown in

Fig. 2, measure the distance from the lower control arm to the frame.

Most passenger car springs do not require lubrication. Many cars use full length waxed fabric "liners" between the longer leaves of the springs. Fords have waxed fabric pads at the ends of the leaves, while still other cars, such as Kaiser, Frazer, and Willys have rubber buttons seated in depressions in the leaf ends. Since these rubber buttons are designed to flex rather than to slide on the adjacent leaves, any lubrication of these rubber buttons destroys their proper control of the spring action. The full length fabric liners are treated with special compounds, whose proper control of the springs is destroyed by oil. So replace worn pads or liners but do not lubricate.

Since most of the relative motion between adjacent leaves occurs near the ends of the longer leaves, a satisfactory repair of full length liners may be made by replacing 4 in. strips at the ends. After jacking up the weight of the car body off the springs and holding the ends of the leaves apart with a wooden wedge, use a piece of hacksaw blade ground down to a width of $\frac{1}{4}$ in. to cut off the worn section of the old liner. (Fig. 1.) Then the new section can be installed easily.

The waxed fabric pads, fitted into the tips of the 1949 and 1950

(Continued on page 100)

VIXEN

Trade Mark Reg. U. S. Pat. Off.

MILLED CURVED-TOOTH FILES

Here's why the new "VIXEN" babbitt cut file gives better body and fender filing...



It's a "VIXEN" when you see the white carton and the new white envelope.

Yes, *five ways better!* A "VIXEN" smooths as it cuts. It gives genuine shearing (true cutting) action, without scraping. Removes more metal more easily. No clogging of teeth.

For autobody filing at its best, ask your jobber for this popular "VIXEN" babbitt cut file.

HELLER BROTHERS COMPANY

America's Oldest File Manufacturer

Newark 4, New Jersey Newcomerstown, Ohio



Handy holder easily curves "VIXEN" in or out to fit contour of surface. Only a milled curved-tooth "VIXEN" can be resharpened again and again. This means that "VIXEN" costs less in the long run.

"VIXEN" FILES ARE MADE ONLY BY HELLER



GENUINE **Ford** PARTS

mean more business for you!



Record-breaking sales of Genuine Ford Parts reflect the steadily growing demand by Ford owners for the replacement parts that are made right to fit right and last longer. Keeping Fords all Ford is becoming more and more recognized as the right thing to do.

THIS MEANS MORE FORD SERVICE BUSINESS FOR YOU:

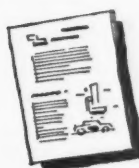


Customer Satisfaction—with the right parts that save Ford owners time, money and assure long lasting, efficient and economical performance.

National Advertising—Throughout the year, consistent national advertising urges Ford owners to see you for Genuine Ford Parts.



Convenient Wholesale Service—your nearest Ford Dealer is a distributor for Genuine Ford Parts, ready to serve you at all times.



Timely News Bulletins—designed to keep you up to date on latest service techniques . . . parts data . . . product information . . . if you are not already receiving these bulletins, ask your Ford Dealer to put you on the mailing list, today.



Put this sign to work for you . . . bring in more Ford service business. Get complete details from your Ford Dealer.

FORD Division of FORD MOTOR COMPANY

The leading lines

Here's a list of companies that manufacture the automotive products your customers know and trust. They're the most profitable lines you can order from your jobber. They're all advertised in The Post.

A. C. Spark Plug Division
 Albertson & Co., Inc.
 Allis-Chalmers Mfg. Co.
 American Chain & Cable Co., Inc.
 American Coach Co.
 American Petroleum Institute
 Oil Industry Information Committee
 Anderson Co., The
 AP Parts Corp., The
 Armstrong Rubber Co.
 Arvin Industries, Inc.
 Atlas Press Co.
 Atlas Supply Co.
 Austin Motor Car Co., The
 Auto-Lite Battery Corp.
 Barron & Co., E. T.
 Bear Mfg. Co.
 Belden Mfg. Co.
 Bendix-Westinghouse Automotive
 Air Brake Co.
 Black & Decker Mfg. Co., The
 Borg-Warner Corp.
 Bostwick Laboratories, Inc.
 Bowers Battery & Spark Plug Co.
 Boyle-Midway, Inc.
 Breeze Corporations, Inc.
 Briggs & Stratton Corp.
 Brown Corp., W. R.
 Bryce, Inc., Robert A.
 Buick Motor Div.,
 General Motors Corp.
 Bullseye Corp.
 Bunny Bears, Inc.
 Cadillac Motor Car Div.,
 General Motors Corp.
 Carpenter Mfg. Co.
 Carter Carburetor Corp.,
 Div. American Car & Foundry Co.
 Casco Products Corp.
 Casite Corp., The
 Caterpillar Tractor Co.
 Champion Laboratories, Inc.

Champion Spark Plug Co.
 Chevrolet Motor Div.,
 General Motors Corp.
 Chicago Show Printing Co.
 Chrysler Corp.
 Chrysler Div., Chrysler Corp.
 Chrysler Motors Parts Corp.
 Collins & Aikman Corp.
 Commercial Solvents Corp.
 Continental Oil Company
 Crest Co., The
 Crosley Motors, Inc.
 Cushman Motor Works, Inc.
 Delco Products, Div. of
 General Motors Corp.
 Delco Batteries
 Delta Power Tool Div.,
 Rockwell Mfg. Co.
 DeSoto Div., Chrysler Corp.
 Detroit Diesel Engine, Div. of
 General Motors Corp.
 DeVilbiss Co., The
 Diamond T Motor Car Co.
 Doan Mfg. Corp.
 Dodge Car Div., Chrysler Corp.
 Dodge Truck Div., Chrysler Corp.
 Dollinger Corp.
 Dow Chemical Co., The
 du Pont de Nemours & Co., Inc., E. I.
 Eaton Mfg. Co.
 Electric Auto-Lite Co., The
 Electric Sprayit Co.
 Electric Storage Battery Co., The
 Ethyl Corp.
 Federal-Mogul Service, Div. of
 Federal-Mogul Corp.
 Firestone Tire & Rubber Co., The
 Fisher Body Div.,
 General Motors Corp.
 Fisk Tire Co.
 Ford Motor Co.

Ford Parts & Accessories Div.,
 Ford Motor Co.
 Fram Corporation
 Freedom-Valvoline Oil Co.
 Freeman & Freeman, Inc.
 Fruehauf Trailer Co.
 Fulton Co., The
 Fulton Sylphon Div., Robert
 Shaw-Fulton Controls Co.
 Gabriel Co., The
 Gale Hall Engineering, Inc.
 General Electric Co.
 General Motors Corp.
 GMC Truck & Coach Div.,
 General Motors Corp.
 General Tire & Rubber Co., The
 Glass Laboratories, Inc.
 Goode Products Co.
 Goodrich Co., The B. F.
 Goodyear Tire & Rubber Co., The
 Gould National Batteries, Inc.
 Grey-Rock Div. of Raybestos-
 Manhattan, Inc.
 Grizzly Mfg. Co.
 Guide Lamp Div.,
 General Motors Corp.
 Gulf Oil Corp.
 Guthwirth & Co., George
 Hastings Mfg. Co.
 Heet Div., DeMert & Dougherty, Inc.
 Herbrand Div., The Bingham-
 Herbrand Corp.
 Holley Carburetor Co.
 Hollingshead Corp., R. M.
 Hudson Motor Car Co.
 Hull Mfg. Co.
 Hydro-Power Sales, Inc.
 International Harvester Co.
 International Mfg. Co.
 J & H Sales
 Johnson & Son., Inc., S. C.
 Joma Mfg. Co., Inc.

THE SATURDAY EVENING
POST

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THE SATURDAY EVENING POST

Kaiser-Frazer Corp.
Kari-Top Co.
Karseal Corp.
Keller Research Corp.
Kelly-Springfield Tire Co., The
Kendall Refining Co.
Koppers Company, Inc.
Liberty Coach Co., The
Linck Co., Inc., O. E.
Lincoln Div., Ford Motor Co.
Lion Oil Co.
Lubaid Co.
Lumite Div., Chicopee Mfg. Corp.
of Georgia
Mack Trucks, Inc.
Macmillan Petroleum Corp.
Mac's Super Gloss Co.
Mall Tool Co.
Manning, Maxwell & Moore, Inc.
Maremont Automotive Products, Inc.
Marmon-Herrington Co., Inc.
Meiser & Co., G. H.
Mercury Div., Ford Motor Co.
Mesco Co.
Minnesota Mining & Mfg. Co.
Monowatt, Inc.
Monroe Auto Equipment Co.
Motorola, Inc.
Nash Motors, Div. of Nash-Kelvinator Corp.
National Automotive Parts Ass'n.
National Automotive Research Corp.
National Carbon Co., Unit of
Union Carbide and Carbon Corp.
National Plastics Products Co., The
Niehoff & Co., C. E.
Oldsmobile Div.,
General Motors Corp.
Olin Industries, Inc., Electrical Div.
Owens-Corning Fiberglas Corp.
Packard Motor Car Co.
Parker Rust Proof Co.
Pennsylvania Grade Crude Oil Ass'n.

Pennsylvania Refining Co.
Pennsylvania Rubber Co.
Pennzoil Co., The
Perfect Circle Corp., The
Petersen Mfg. Co.
Plymouth Div., Chrysler Corp.
Pontiac Motor Div.,
General Motors Corp.
Prest-O-Lite Battery Co., Inc.
Prior Products
Proto Tools
Purolator Products, Inc.
Pyroil Co., The
Quaker State Oil Refining Co.
Quincy Compressor Co.
Ramsey Corp.
Ray-O-Vac Company
Raybestos Div. of Raybestos-Manhattan, Inc.
Reading Batteries, Inc.
Redman Trailer Co.
Reo Motors, Inc.
Retlif Corp.
Richlite Mfg. Co.
Sav-A-Battery, Inc.
Screw Research Ass'n.
Scully Signal Co.
Sealed Power Corp.
Seiberling Rubber Co.
Shakeproof, Inc., Div. of Illinois
Tool Works
Shaler Co., The
Shell Oil Co., Inc.
Sheppard Co., Inc., R. H.
Simoniz Co., The
Skilsaw, Inc.
Socony-Vacuum Oil Co., Inc.
Sonneborn Sons, Inc., L.
S. O. S. Company, The
South Wind Div.,
Stewart-Warner Corp.

Spark-O-Liner Corp.
Sparks-Withington Co., The
Standard Oil Co. of California
Stewart-Warner Corp.
Studebaker Corp., The
Susquehanna Mills, Inc.
Texas Company, The
Tide Water Associated Oil Co.
Timken-Detroit Axle Co.
Timken Roller Bearing Co., The
Trailer Coach Manufacturers' Ass'n.
Trico Products Corp.
Twitchell, Inc., E. W.
U C Lite Mfg. Co.
Union Oil Co. of California
United Motors Service, Div. of
General Motors Corp.
U. S. Industrial Chemicals, Inc.
U. S. Metal Products
United States Rubber Co.
Upton Brothers, Inc.
Vaco Products Co.
Vagabond Coach Mfg. Co.
Van Aucken, Inc.
Wagner Electric Corp.
Walker Mfg. Co. of Wisconsin
Ward Products Corp.
Warner-Patterson Co.
Westinghouse Electric Corp.
White Motor Co., The
Whizzer Motor Co.
Willard Storage Battery Co.
Willys-Overland Motors, Inc.
Wilkens Mfg. Co.
Wix Accessories Corp.
Wolf's Head Refining Co., Inc.
Wooster Rubber Co., The
Zaco Laboratories, Div. of Zip
Abrasive Co.
Zecol, Inc.
Zink Corp., The Howard

NOTE: The above listing includes manufacturers whose advertising has appeared in The Post from Nov. 1, 1949, through Nov. 1, 1950.

heart of America

Spring Service Continued from Page 96

Ford springs, are easily replaced by taking the weight off the springs and prying the leaves apart.

Many cars have been fitted with springs having steel spring covers and, when such covers are in good condition, they may be refilled with a special spring cover lubricant every 5,000 or 10,000 miles, using

the special lubriclamp fitting to force the lubricant up through the canvas pad in the bottom of the steel cover. Chevrolet recommends a "soft, smooth cup grease to which 8 to 10 per cent of graphite has been added" for use in steel spring covers.

Because of the relatively large amounts of metal in bus, truck

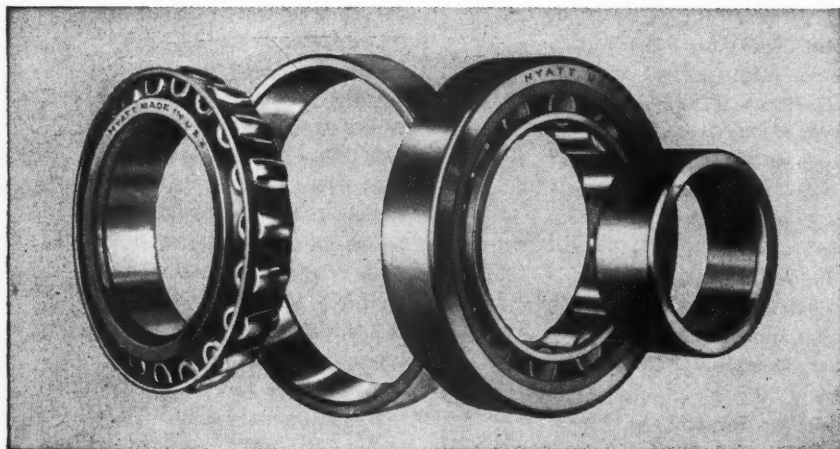
and trailer springs, and their relative accessibility, as compared with the springs of passenger cars, the repair of commercial vehicle springs usually differs from that of passenger car springs. Consequently, some commercial vehicle operators usually replace but one leaf at a time.

Since the average shop is most frequently called upon to replace but one leaf at a time on commercial vehicles, let's see how this can be done most easily and profitably. Some spring service specialists jack up the chassis frame to remove all weight from the spring, with the wheel still resting on the ground. Then the nut is removed from the center bolt (or tie-bolt) and the four U-bolt nuts removed, using a "nut-spinner" to save time.

The main leaf is left attached to the shackles, as both top and bottom surfaces of the main leaf can be inspected, after the other leaf has been removed. To do a good job all the other leaves (in addition to the broken leaf) should be removed, cleaned with a wire brush and inspected for flaws. It should especially be checked along the edges, for cracks which might result in premature breakage.

When springs are repaired by a spring manufacturer, the inspector "drops" each leaf on a metal surface as he flips it over to inspect the other side. Why? So

(Continued on page 102)



HYATTS—made for the job

On a car, truck or bus overhaul where Hyatt Roller Bearings may be replaced remember—the original Hyatts were specially "engineered" for each particular application.

That's why it pays in making Hyatt replacements to use only genuine Hyatts and be sure that after the overhaul all parts will be as originally designed. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey and Detroit, Michigan.



HYATT ROLLER BEARINGS
AVAILABLE EVERYWHERE THROUGH UNITED MOTORS DISTRIBUTORS



THE NEXT 30 MILES ARE FREE!

ENGINEERING

B-W

PRODUCTION



One of Borg-Warner's great contributions to the automotive industry and America's car owners is the B-W Automatic Overdrive. When it is engaged, every mile driven is restful, relaxed—free from fatiguing engine vibration and noise. And out of every 70 Overdrive miles enough gas is saved to stretch the distance 30 miles further.

That's because the B-W Overdrive cuts engine revolutions 30% at speeds above 26 miles per hour. At 50, for

instance, a car's engine is lazying along at 35. That means less engine wear, too—longer life and fewer repair bills.

The Automatic Overdrive is a development and product of B-W's Warner Gear Division. It is typical of the advanced engineering and precision production with which Borg-Warner daily serves the automotive industry . . . and America.

BW

Engineering makes it work

BW

Production makes it available

ENGINEERING

B-W

PRODUCTION

ALMOST EVERY AMERICAN BENEFITS DAILY FROM THE 185 PRODUCTS OF **BORG-WARNER**

THESE UNITS FORM BORG-WARNER, Executive Offices, Chicago: BORG & BECK • BORG-WARNER INTERNATIONAL BORG-WARNER SERVICE PARTS • CALUMET STEEL • DETROIT GEAR • DETROIT VAPOR STOVE FRANKLIN STEEL • INGERSOLL STEEL • LONG MANUFACTURING • LONG MANUFACTURING CO., LTD. MARBON • MARVEL-SCHLEBLER CARBURETOR • MECHANICS UNIVERSAL JOINT • MORSE CHAIN MORSE CHAIN CO., LTD. • NORGE • NORGE-HEAT • PESCO PRODUCTS • ROCKFORD CLUTCH SPRING DIVISION • WARNER AUTOMOTIVE PARTS • WARNER GEAR • WARNER GEAR CO., LTD.

Spring Service Continued from Page 100

that he can tell by the "zing" whether or not there is a flaw in the steel.

The secret of this short cut is the use of an extra long tie bolt which, when tightened up (preferably by the use of a nut-spinner) draws the assembly of leaves together so that the nuts can be placed on the U-bolts and securely

tightened. Then the surplus threaded end of the tie-bolt is cut off.

The mistake most frequently made in servicing springs is the failure to pull up the U-bolt nuts sufficiently tight. Center breakage of springs is an almost certain indication of loose U-bolts.

Fleet operators of commercial

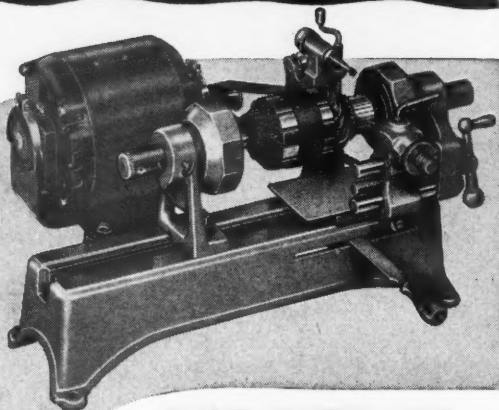
vehicles have found that center breakage of springs is greatly reduced by retightening U-bolts after the first day's run when a spring has been repaired or replaced. Of course, the tightening of passenger car U-bolt nuts can be overdone so the mechanic should follow the recommendations of the car manufacturer as, for instance: On 1949 and 1950 Fords, this should be done with a torque wrench to 45-50 ft. lbs. On station wagons it should be 55-60 ft. lbs. Pontiac recommends 60-65 ft. lbs. on free fitting threads.

Fleet operators use wrenches with handles of length proportional to size of bolt, so that the mechanic can tell by the "feel" of the pull or by the sound of the "creak" when the nut has been properly tightened. Commercial vehicle operators suggest for wrench handles: $\frac{5}{8}$ in. U-bolt nuts—handle 3 ft. long, $\frac{3}{4}$ in. U-bolt nuts—handle 4 ft. long, $\frac{7}{8}$ in. and 1 in. U-bolt nuts—handle 6 ft. long.

After the spring U-bolts have been tightened, the spring clip plate should be checked, as shown in Fig. 3, for bowing. Check the manufacturer's specifications for the allowable amount of bowing on this plate.

THIS TRUCUT PACKAGE REALLY PUTS YOU IN BUSINESS!

GET EXTRA PROFITS
from
Starter-Generator
Work!



TRUCUT ARMATURE LATHE
AND UNDERCUTTER

There's plenty of extra profit in starter-generator work . . . if your shop is equipped to handle it!

And you can handle it with these three TRUCUT tools . . . all tried and tested . . . all designed especially for automotive repair jobs! With them, you can machine and undercut commutators perfectly; test for shorts, open circuits, and grounds; make quick, easy work of dismantling and assembling generators. The TRUCUT Press is also useful on dozens of other jobs around your shop.

This TRUCUT package actually pays for itself in an amazingly short time. Enables you to handle work you are now sending out . . . or helps you to do it more quickly and profitably! Write for free details today.

FRANK N. WOOD CO.

... SINCE 1932

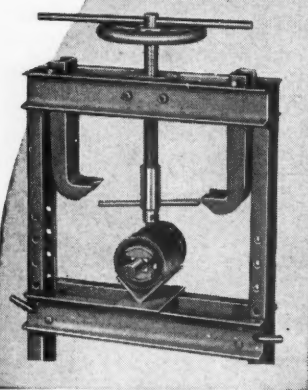
TRUCUT

344 W. Main Street • Waukesha, Wisconsin
Pacific Coast Address
1330 W. Olympic Blvd., Los Angeles 15, Calif.

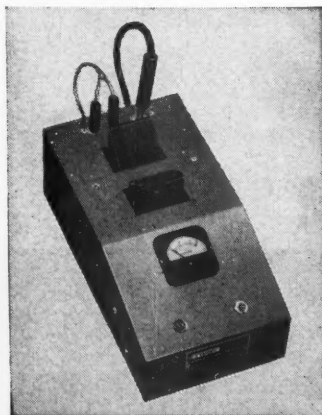
Gasoline

Despite increases in gasoline prices over the past two or three years, the price per gallon excluding taxes is about the same as it was 25 years ago. Ethyl Corp. has completed an exhaustive study of quality and price of today's fuels as compared with those of a quarter century ago. The study shows price differentials between regular grade gasoline between July 1, 1925, and the same date this year as follows: Average dealer price, 4.2 cents lower; average retail price excluding taxes (for 50 cities) 1.8 cents lower, but average retail price, including taxes, 2.7 cents higher. Current gasoline, according to the study, gives about 50 per cent greater value per gallon than the gasoline sold in 1925 in performance, economy, and ton mileage. Octane rating a quarter century ago averaged about 55 compared with the average of 83 today.

Chilton's MOTOR AGE, NOVEMBER, 1950



TRUCUT SHOP PRESS



TRUCUT ARMATURE TESTER

THIS BRILLIANT NEW



New Britain RATCHET REALLY

CLICKS



SET NO. 6050

This 50 piece New Britain Utility Tool Set includes both $\frac{1}{4}$ " and $\frac{1}{2}$ " Drive Sockets and Drive Parts together with most used Flat Wrenches and Screw Drivers.

There are many New Britain Tools with the soundness, quality and all 'round utility that excite admiration among mechanics . . . but this new Ratchet is so beautifully engineered, so tough, so sweetly balanced that one feel of it — and you're sold! It has everything . . . rugged strength, comfortable grip, triple plate, chrome finish and a s-m-o-o-t-h action that whips through work like a dream . . . in short — this New Britain Ratchet CLICKS, and how!

Check with your Jobber. He has this brilliant new Ratchet in $\frac{1}{4}$ " — $\frac{3}{8}$ " and $\frac{1}{2}$ " Drive and a complete Line of New Britain Tools to go with it. So, no matter which New Britain Tool you need . . . remember it's no further away from you than your telephone. When you need a Tool — and, you *do need* this new Ratchet — PHONE YOUR JOBBER! The New Britain Machine Co., New Britain, Conn.



New Britain

GREATER STRENGTH • BETTER FIT

HAND TOOLS

Everything you need for



The Wagner Family Portrait of Hydraulic Brake Products



**LOCKHEED HYDRAULIC
BRAKE PARTS and
FLUID • NoRoL
CoMax BRAKE LINING
AIR BRAKES • TACHOGRAPHS
ELECTRIC MOTORS • TRANSFORMERS
INDUSTRIAL CRANE BRIDGE BRAKES**

better brake service...

ALL* from ONE SOURCE!



...your Wagner Automotive Jobber

You can give your customers faster, more efficient service on brake systems by standardizing on genuine Wagner brake service products. This top quality line includes Wagner Lockheed Hydraulic Brake Parts and Fluid, and Wagner CoMaX Brake Lining.

* Wagner Lockheed Hydraulic Brake Fluid is an all-season fluid that functions perfectly under all driving temperatures. It amply lubricates the brake system and maintains its chemical characteristics after long use. Wagner Lockheed Brake Fluid mixes with all other approved fluids and is recommended for all hydraulic brakes. It surpasses S. A. E. standards.

* Genuine Wagner Lockheed Hydraulic Brake Parts assure top performance and long service life. Only Wagner offers 696 different types of brake cylinders from one dependable source to meet *all* brake requirements. Wagner parts are available in factory-sealed kits, as individual parts, and as completely assembled cylinders.

* For more quick, safe, smooth stops, reline with Wagner CoMaX Brake Lining. A non-compressible, long-lived lining of uniform texture for smooth, quiet performance under the most severe braking conditions. Available in sets, rolls, blocks, slabs and cut segments to meet all car, truck, tractor and bus requirements.

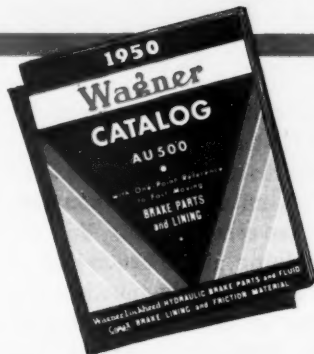
You can depend on WAGNER QUALITY because Wagner products are used as original equipment by automobile, truck and trailer manufacturers. For complete details, see your nearest Wagner Jobber or write us.

Wagner Electric Corporation

6498 PLYMOUTH AVE., ST. LOUIS 14, MO.

See Wagner Products at Booths A 105, 107, 109, 111, A. S. I. Show

H20-13



WRITE FOR FREE COPY
OF CATALOG AU-500—
covering all Wagner
Automotive Service
Products.



Wagner Electric Corporation
6498 Plymouth Ave., St. Louis 14, Mo.

Please send me free copy of Wagner Catalog AU-500.

NAME _____

FIRM _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Clearing House Continued from Page 55

the road better, please let me know. I would appreciate all the information on these questions. Edward Beycz.

I WOULD suggest using the 4.11 to 1 as this is the most practical for the type racing you are doing. To get maximum performance without adding any special equip-

ment I would suggest doing a valve job. While doing this, change the seat angles from 45 to 30 degrees as this has proven very successful. Also remove the distributors and have the cam angle set to specifications and the centrifugal and vacuum advance checked and set on a reliable tester. Also install larger main jets in your carburetor.



"SAVES MECHANICS' TIME ON EVERY SOLDERING JOB"

says Service Manager

J. HAROLD MOONEY

Geo. W. Coupe Chevrolet Agency, Glenside, Pa.

"A mechanic can smoke a lot of cigarettes waiting for old-fashioned soldering tools to heat. But our new 250-watt Weller Soldering Guns save a lot of time. 5-second heating and trigger-switch control mean no wasted time or current. And you never have to unplug the gun between jobs. We solder better and faster, too, on *light and heavy work*—because Weller's *dual heat* can be controlled to suit the job. I figure the power and time we saved paid for these guns in a few months."

New WELLER 250-Watt Auto-Mechanics Soldering Gun

Trigger-Switch Control—Instantly on, instantly off.

5-Second Heating—No waiting. No wasted current. Saves hours and dollars every month.

Dual Heat—Single heat 200 watts; dual heat 200/250 watts; 120 volts. 60 cycles.

Wellertip—Rigid, chisel-shaped, provides more soldering area for faster heat transfer.

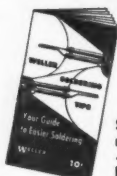
Solderlite—Prefocused spotlight shows you what you're doing every minute.

Longer Reach—Slides easily between wiring—under the dash—into the tightest corners.

Over/Under Terminals—Brace tip and give maximum visibility.

Order from your distributor today, or write for bulletin direct.

WELLER
ELECTRIC CORP.
801 Packer Street • Easton, Pa.



Soldering Guide—Get your new copy of "Soldering Tips"—revised, up-to-date, fully illustrated 20-page booklet of practical soldering suggestions. Price 10c at your distributor, or order direct.

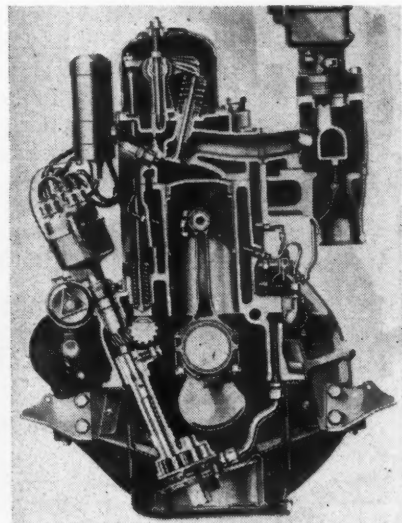


As to improving the riding of this car, that is going to be very difficult **providing your shock absorbers are working properly and that the sway bars are in good condition.**

Chevrolet Has a Hard-to-Find Compression Leak

We have a 1947 Chevrolet that is leaking water into the oil and also blowing compression into the radiator. We have taken all the valves out and soaked the head in kerosene to see if it had a crack in it but none showed up. Water seemed to come out in the No. 5 cylinder so we cleaned it all up but couldn't find any cracks in it either. We have put on three head gaskets and also milled down the head to see if it was warped, but it wasn't. We also shellacked the head gasket the last time but it still blows compression. Could you please send us some data on what could cause this? Clifford G. Beard, Baxter Garage, P.O. Box 107, Denver City, Texas.

IT seems to me that the trouble is in the head although it could be in the cylinder wall. You will probably find a sand hole in the combustion chamber. If No. 5 cylinder shows signs of water, I



am quite sure the trouble is located in that cylinder. It is very hard to detect a condition of this kind. This only occurs when the car is under compression. You might try applying air to the cylinders. This can be done by putting the cylinders in firing position and applying compressed air to the spark

plug hole. An adapter can be made to do this by cutting out the top of a spark plug and installing a valve stem. Usually about 80 pounds of air is sufficient to make this leak show into the radiator. Remove the radiator cap and watch for bubbles in the top while the air pressure is being applied.

Color-Coded Brake Springs Cause Confusion

I have two problems on which I would appreciate information. Recently one of our mechanics was relining brakes on a 1946 Packard. Not knowing the springs were of unequal strength, he put them in the cleaning can, after which he discovered several different colors. Can you tell us which way they should go back on the car?

Secondly, I have a customer with a 1949 Cadillac. The motor has always been noisy and now after 30,000 miles it has not improved. Would you please inform me if it is possible to quiet the valve action on this model? E. D. Dotzauer, West Third Street Garage, Long Beach 2, California.

YOU will find two brake springs, one red and one blue. The blue one belongs to the secondary shoe or rear shoe and the red belongs to the primary shoe or front shoe on each wheel.

Concerning the Cadillac engine, there is no reason why you cannot make those valves quiet as it isn't a chronic condition with them. The trouble could be any one of a number of things, such as dirt in the crankcase, scored lifters, improperly adjusted or weak valve lifter plunger springs.

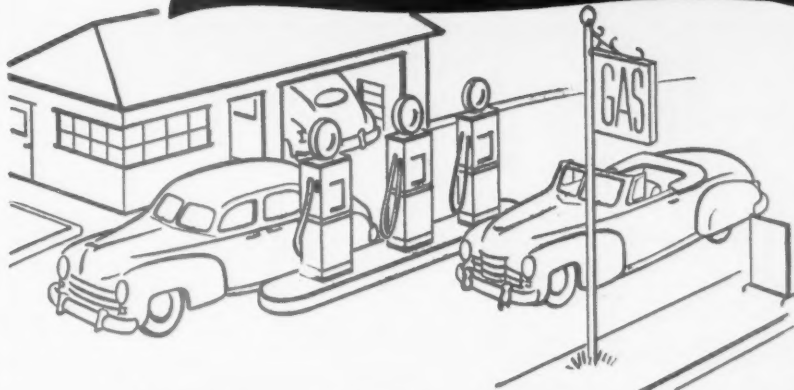
Pistons Freeze and Bearings Fail After Rebore Job

If a block is bored to size of piston oversize, about .040 in. and cylinders are polished afterward, should the piston not fit this hole with proper clearance, especially if the pistons are ordered to fit a .040 in. hole? After this motor is assembled it developed after it was started and run a short while on the road, the motor froze. It was

(Continued on page 108)

CAN YOU USE EXTRA DOUGH?

HERE'S THE WAY TO GET IT!



Every car that goes through your station is a likely prospect for new Battery Cables.

5 OUT OF 10 NEED NEW CABLES

You KNOW that corrosion kills battery efficiency and leads to hard starting and a complete breakdown of the ignition system.

MAKE MONEY . . . MAKE FRIENDS

If you will take a fast look at the battery cables of each car that passes through your station it will make you money to suggest that, where necessary, new cables should be installed.

BOWES "SEAL FAST" CORPORATION
INDIANAPOLIS 7, INDIANA



RECOMMEND

BOWES CORRODELESS



**TERMINAL BATTERY
CABLES!**

**AND YOU WILL MAKE MORE
MONEY AND . . .
MORE FRIENDS**

Clearing House Continued from Page 107

found that two of the pistons froze and broke. This was corrected and two new pistons were installed and cylinders were honed. Now it develops that there is a knock in the motor. In dismantling this motor we found the center bearing in the block bad. Could this have been caused by the pistons freezing in the cylinders? Gabriel Haydel, Jr.,

W. K. Smardon Company, P. O. Box 155, Franklin, Louisiana.

WHEN a piston seizes in a cylinder it is usually caused by excessive heat, due to insufficient piston clearance or the engine running hot. I presume that the block and radiator were cleaned at the time of the rebore job. It occurs to

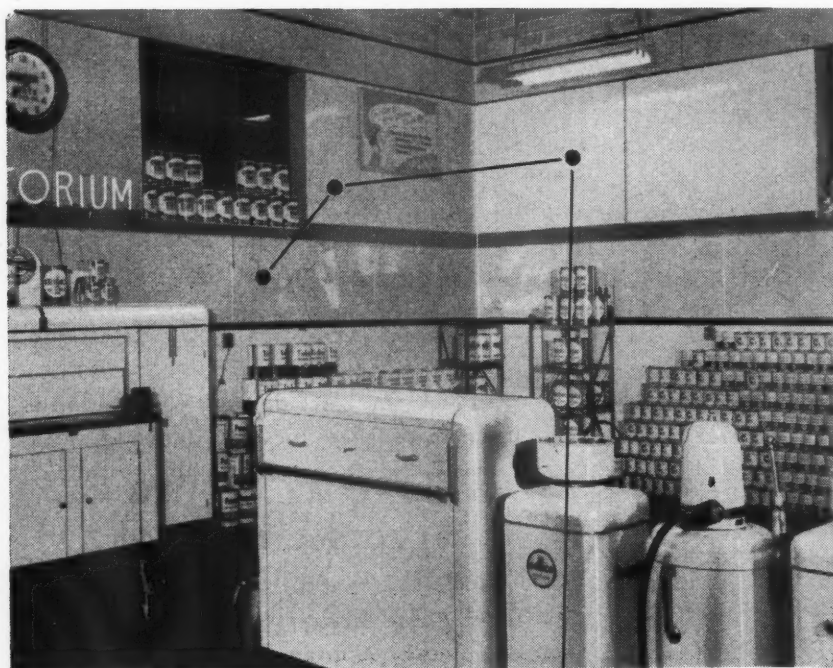
me that if the oil pressure was low when this engine was first started, this might have caused the main bearing failure. I can think of no reason for the main bearing burning out, other than if the engine wasn't cleaned of all chips after the rebore. Sometimes metal from the block finds its way around the bearings, and in most cases will cause bearing failure. The water distribution tube in the block should be replaced.

Navy Fords Are

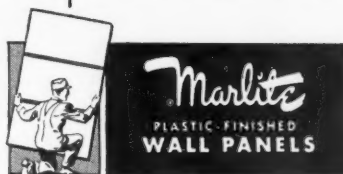
Using Too Much Gas

My main trouble is getting good gas mileage from Fords. I have gone back in the Navy and am in charge of inspections and general overhaul. We have two Fords, a 1946 and a 1949 V-8, which suddenly dropped to 12-14 miles per gallon. A complete overhaul was given the 1946. The 1949 checks out okay. The distributor and carburetor have been gone through thoroughly. The ignition system is okay. Both cars have been driven different ways, that is, what they call hot rodding and easy driving. Still the gas mileage is low. On a trip the 1949 came through with 16-17 miles per gallon, no overdrive. I would appreciate if you can give me any information on above. We drilled the air jets on idle and high speed system. It idled more evenly, but seemed to starve around 55. It is now

(Continued on page 111)



Now...modernize with Marlite and forget about costly redecorating!



Modern, business-attracting Marlite interiors installed even 15 years ago are still as sparkling bright and maintenance-free as ever! For durable, lustrous Marlite plastic-finished wall and ceiling panels are not only economical to install but also eliminate periodic painting and redecorating... seal out

grease, dirt, oil, moisture... seal in all the color. Marlite goes up fast over old walls or new, cleans easily with just an occasional wiping with a damp cloth. Plan smart, new decorative treatments in sales rooms, lubratoriums, wash rooms and offices, and for counters and displays. See coupon below!

MARSH WALL PRODUCTS, INC., Dept. 1127, Dover, Ohio
Subsidiary of Masonite Corporation
Please send free set of Marlite Folders containing actual samples and new, economical decorative ideas.

NAME _____ TITLE _____
ADDRESS _____
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JONES AUTO PARTS



"I just wrote the factory and asked for some free display material."

Make more Cartridge Sales with

FRAM

**It stands to reason that Fram,
world's largest manufacturer
of automotive oil-air-fuel-
water filters, is your best bet
for more sales...more profits**

Give your customers the best. Give yourself the chance to make every sale. Standardize on Fram ... there's a genuine Fram Cartridge to fit most every make and model oil filter on the market.

There's no guesswork. Fram gives you a handy *Cartridge Checker* wall chart that shows you at a glance what cartridge to install in most any make filter. Saves time . . . helps you make quick, profitable sales.

Two superior types of cartridges . . . the famous Fram Filcron for all Fram Oil & Motor Cleaners . . . the popular Fram Cel-Pak for all Fram and most other make oil filters. Both give your customers top-quality performance and clean-oil protection. Both give you a good healthy profit with repeat sales at least twice a year.

Take this tip to boost your sales

There's business to be had . . . profits to be made . . . if you go after it! Use that old time-proven, sales-tested question, "How's your oil filter?" to get you under the hood. Then make the sale by showing how "The Dipstick Tells the Story." By doing this, you'll not only sell more Fram Filters and Cartridges, but also more oil and other profitable under-hood items. So cash in . . . stock Fram . . . Sell Fram . . . see your Fram Jobber now! FRAM CORPORATION, Providence 16, R.I. In Canada: J. C. Adams Co., Ltd., Toronto, Ontario.

**Western Union Operator 25 lists names
of all Registered Fram Dealers. This extra
Fram service helps you get business!**



You Can't Beat This Team!

. . . famous Fram Oil & Motor Cleaners and Fram Replacement Cartridges. Precision engineered in modern laboratories . . . tested on the road . . . Dust Tunnel tested . . . proved by years of use . . . preferred by over 14,000,000 American motorists.



FRAM

OIL • AIR • FUEL • WATER

FILTERS

The
Original
and
Largest-Selling
"on-the-engine"
Carburetor
Detergent
in the
World!



PENNSYLVANIA REFINING COMPANY
CLEVELAND 4, OHIO



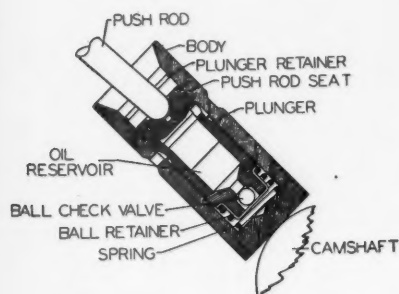
Clearing House

back to stock. John Rosenberger, Johnny's Garage, 1111 Rutland Street, Box 154, Opa Locka, Florida.

IF these engines are properly tuned there is no reason why you should not get between 17 and 19 miles per gallon. I would suggest that you advance the timing slightly. Also, recheck the vacuum and centrifugal advance on the distributor as it is most important to have these exactly right. It is hard to understand why these should have dropped so suddenly. Have you checked the fuel pump to make sure that the diaphragms are not leaking, also the flexible gas line? I would also reset the float level on both of these jobs. Drilling the idle and high speed jets would make them use more gas.

Adjusting Hydraulic Valve Lifters on Buick

I have a 1941 Buick Special series 40 for which I bought a new engine last August. The new engine is equipped with hydraulic valve lifters and I have been unable to find any information around here on the proper way to set the tappets. We also have several new



or 1949 Buicks trading here on which we would also like to do some work, but would like to get the information on the hydraulic lifters first. R. J. Eddy, Jr., 104 W. Bridge Street, Oswego, New York.

TO make the initial adjustment on Buick engines with hydraulic lifters, proceed as follows: Crank the engine until the piston

is on top center and both valves are closed. An easy method for doing this is to check the distributor rotor to see which cylinder is in firing position. Turn the adjusting ball stud until all play of push rod between lifter and ball stud is removed and there is no clearance in the valve train. Now turn the adjusting ball stud down exactly two

turns. Then check to make sure that the oil groove on the ball stud is at least half way down in the rocker arm so that it connects with the drilled oil passage in the rocker arm, then tighten the lock nut. If the oil groove on the ball stud is not at least half way down in the rocker arm, turn the ball stud down one additional turn. If the groove is still too high it will be necessary to install another push rod or lifter.



Checking and tightening U-bolts is a matter of seconds with a CP-770 Air Impact Wrench.



CP Air Impact Wrenches are the only impact wrenches with detachable angle heads for close quarter work.

makes easy work
of any
nut-running job

The toughest nuts—even in the most awkward spots—are handled with a CP Controllable Air Impact Wrench. And there's a CP air wrench for every automotive job, from driving screws to tightening spring U-bolt nuts on the heaviest trucks and running nuts on Budd wheels. Capacities: CP-730 to 7/16" bolt size; CP-750 to 5/8" bolt size; CP-770 to 1" bolt size; all equipped with detachable heads.

Controllable power assures that nuts and cap screws on hydra-matic units, connecting rods, cylinder heads and main bearings can be run to proper tightness.

A still larger wrench, CP-365, capacity to 1 1/4" bolt size, is available in straight or angle head models.

Write for full information

See the full line
in Booths
D170-D176
A.S.I. show
December 4-8



AUTOMOTIVE SERVICE EQUIPMENT • FENDER IRONS • ELECTRIC TOOLS
AIR IMPACT WRENCHES • AIR COMPRESSORS • PNEU-DRAULIC PUMPS

Don't let 'em
IT TAKES TWO TYPES OF



For Re-ringing...

LEAK-PROOF

REG. U.S. PAT. OFF.



LEAK-PROOF Piston Rings are guaranteed to do all four:
1, Keep power up. 2, Keep oil down. 3, Give smooth, new motor operation. 4, Give longer life. So, for the jobs that need only rings, install LEAK-PROOF and get full satisfaction in performance and profits.

PRODUCTS OF McQUAY-NORRIS

Fool you...

RINGS TO DO ALL JOBS



For Rebores and Rebuild jobs Rebores-Rebuild

For the reconditioned jobs use McQuay-Norris Rebores-Rebuild ring sets. They're made of Phosalloy for greater elasticity and cylinder wall conformity. They're Altinized for longer life and quicker sealing. These sets contain a special expander type iron oil ring, pictured above.



AVAILABLE WITH CHROME FIRE RING

For use by heavy duty bus and truck fleet operators there is one chrome Fire Ring (top groove) in each "Chrome" Rebores-Rebuild set, as shown above.

MANUFACTURING CO. • ST. LOUIS 10, MO.

A.S.I. Show Continued from Page 33

than 5,000 jobbers already registered for attendance at Chicago are now posting the banners and releasing local publicity, and that at least 11,000 will be following suit in cities, towns and communities all over the country before December 1st.

"That their jobbers attend the A. S. I. Show is vitally important

to the car dealers and garage and service station operators they serve in their local community and area," B. G. Close, King Quality Products, St. Louis, chairman of the show's joint operating committee, states. "Unveiling 1951 lines at Chicago is one thing, but for these same new service parts, equipment, tools and accessories

to reach the ultimate user before spring requires that his local jobber attend the show, select his lines and arrange for delivery into his own stock immediately following the show."

The Chicago show, to be held at Navy Pier, not only will be the biggest ever held, with more than 500 exhibitors, but also will attract a record attendance of both jobber members of the sponsoring associations and non-member jobbers. For the first time, invitations to secure credentials for the show have been mailed to all automotive jobbers listed in official trade directories, whether or not they are members of either National Standard Parts Association, Motor Equipment Wholesaler's Association, which groups, with Motor and Equipment Manufacturers Association, comprise the sponsoring committee.

"We urge the trade in general," Mr. Coffman stated last week, "to recognize these jobbers who are announcing their plans to attend the show, and to look to them as the source to be first with 1951 lines. If a local jobber has not yet decided to attend, we are confident this publicity will encourage his trade to urge his attendance."

Anniversary Celebrated

Spring Garden Institute, one of the best known vocational schools in the country, will celebrate its Hundredth Anniversary on November 19th. The Automotive Training Center of the Institute, under the guidance of Walter Van Ness Pruyn, is one of the largest centers of training for servicemen in the automotive industry.

Wholesalers Advertise

The Automotive Wholesalers Association of New York City has developed a newspaper and direct mail advertising campaign to help the independent repair shop. This campaign is currently appearing in local daily newspapers and is being supplemented with post cards which are furnished free of charge to local independent repair shops. Member Jobbers of the association display enlargements of these ads in a prominent position on their counters and report unusual interest on the part of the Serviceman.

When you buy Rods...

**We re-manufacture to
quality standards. Sold
on exchange basis.**



FEDERAL-MOGUL SERVICE, DETROIT 13, MICH.

(Division of Federal-Mogul Corporation)

Ask Your Federal-Mogul Jobber!

The Complete Line—More than 7,000 Items:

Engine Bearings (Main, Connecting Rod and Camshaft) • Bushings • Connecting Rod Exchange • Reconditioned Connecting Rods • Rebabbitted Connecting Rods • Connecting Rod Bolts and Nuts • V-Seam Piston Pin Bushings • Bearing Metals • Laminated Shims.



Everything
You need

TO MAKE BONDING PAY OFF!

SAFTIBOND
SEGMENTS

SAFTIBOND
POWER-BONDER

GRIZZLY BRINGS YOU THE

EQUIPMENT, THE PROCESS, THE MATERIALS, THE KNOW-HOW
TO BOND LININGS SUCCESSFULLY!

Bear in Mind ... ask for

GRIZZLY
REG. U. S. PAT. OFF.
BRAKE LINING

Watch Grizzly Advertising in the
Saturday Evening Post and Collier's!

Make Grizzly your bonding headquarters! Profit from the wealth of experience Grizzly has gained as originator of ready-to-bond linings and the industry pioneer in bonding methods, materials and equipment. Illustrated here, for instance, is Grizzly's "Saftibond" Power Bonder which produces a quick, fast, sound bond. Positive, controlled air pressure maintains the bonding force with *absolutely no shoe distortion*; an automatic thermostat keeps temperatures at proper levels. (Uses natural or bottled gas for economy.) Even an unskilled worker can bond 40 shoes, 5 sets, per hour. Ask your Grizzly Distributor for full details today! Grizzly Manufacturing Company, Paulding, Ohio.

New Products Show Window

For further information use coupon on p. 65

ing stubborn nuts, bolts or screws that are rusted or frozen on, and for working in hard-to-get-at places. The Impakdriver is sold by itself or in sets with different combinations of bits and sockets.

428. Cleaning Machine

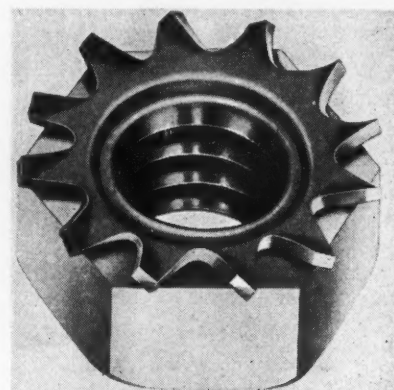
The Aqua-Vac Corp. has developed a machine for cleaning on

the wash rack and for reconditioning used cars for resale. Designated as the Aqua-Vac, this machine enables the operator to do body washing, chassis cleaning, motor cleaning and upholstery cleaning. There is a high pressure pump which has controlled pressures up to 300 lbs. There is no fog or steam with the Aqua-Vac,

the manufacturer states. Upholstery to be cleaned is first vacuumed and then a cleaning agent is applied, brushed into the fabric and vacuumed. Vacuuming may be done either wet or dry. There is no bag to be emptied. This machine sprays either a solvent for grease and oil cleaning such as motors, parts and so forth, or sprays a neutral detergent for car washing, floor and wall cleaning and so forth.

429. Nuts With Washers

Shakeproof, Inc., Division of Illinois Tool Works, announces a new fastening invention known as Keps. Keps are pre-assembled nuts and Shakeproof lock washers, which are handled as one so as



to eliminate time lost in handling the nut and lock washer separately. Other advantages claimed for Keps are easier starting and driving, simplified ordering and stocking and tighter fastening. The nut is started easily because there is no juggling of the lock-washer. It has a "funneled" opening which guides the nut on. It spins on freely and is said to tighten firmly.

430. Body Parts

Hutchins Mfg. Co. introduces the Hutchins rear door Krown for 1949 and 1950 Chevrolets, Pontiacs, and Oldsmobiles (with "A" body). This door Krown is designed to repair the part of the door most frequently damaged. It eliminates replacement of door or complete panel and is designed and made to fit without the seam showing on Chevrolet.

(Continued on page 118)



Prescribe Burd "Super-Hi-Speed" Oil Rings for the cylinders that show the ravages of miles and high speed. It's the ideal piston ring for extreme cases of wall wear (1) Because the high flexibility of the cast iron ring assures conformance to cylinder walls; (2) Steel segments installed below the cast ring give maximum wiping action without excessive wear. Use Burd Super-Hi-Speed Combination Set to put new vitality in worn engines. They're right for you and right for your customer when you want positive oil control. Get them from your jobber . . . install them with profit.

BURD PISTON RING CO., ROCKFORD, ILL.





You can build customer confidence with **KENT-MOORE** SPECIAL-PURPOSE SERVICE TOOLS

It's natural, the pride a man takes in the automobile he drives. It's natural, too, for him to want it properly serviced in strict accordance with factory recommended procedures. And when he watches a mechanic at work on his car, he cannot help being favorably impressed by the quick sure efficiency made possible by . . . Kent-Moore Special-Purpose Service Tools.

For you see, Kent-Moore Tools are developed in close cooperation with leading automobile manufacturers to perform essential service operations for which no adequate standard tools exist. And each one is designed to accomplish its specific job quickly, easily, accurately . . . without damage to parts and at lower cost than is possible by means of improvised makeshift methods.

No wonder then that, wherever they're used, Kent-Moore Special-Purpose Service Tools play an important part in building customer confidence, in boosting service volume.

YOURS FOR THE ASKING!

New Kent-Moore Special Service Tool Guide which describes and illustrates the entire line of Kent-Moore Special-Purpose Service Tools for nine leading makes of cars through 1950 models. Classifies tools by type of service . . . gives essential application data . . . contains complete convenient price information. And it's absolutely FREE . . . yours for the asking without obligation. So send for your copy today!



KENT-MOORE ORGANIZATION, INC.

GENERAL MOTORS BUILDING • DETROIT 2, MICHIGAN

SALES AND SERVICE ENGINEERING REPRESENTATIVES IN PRINCIPAL CITIES COAST-TO-COAST

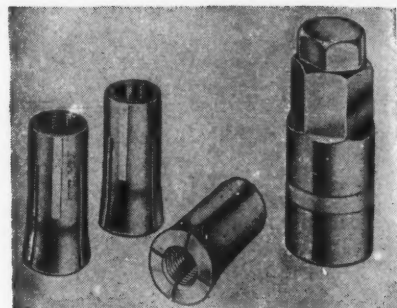
New Products Show Window

For further information use coupon on p. 65

431. Stud Removers

Snap-on Tools Corporation has announced two series of threaded collet type stud removers and inserters. The smaller size has 14 different collets available to handle studs from $\frac{1}{4}$ in. to $\frac{5}{8}$ in. in diameter, in both fine and coarse thread sizes. The larger model

has 6 collets available for $\frac{3}{4}$ in. to 1 in. diameter studs in fine and coarse thread sizes. The correct collet is inserted in the housing and the whole unit is then threaded over the stud. Turning the bolt on top draws the slotted tapered collet up into the housing compressing it and locking it onto the stud threads. Once the tool is



locked onto the stud the whole assembly becomes a rigid unit that can be turned with a wrench. An important feature claimed by the manufacturer is the ability of these tools to operate in restricted areas. Outside diameter of the small unit is only $1\frac{3}{8}$ in.

BRUNNER
SINCE 1906

AIR helps you serve better

Cast a Critical Eye on these Compressor parts!



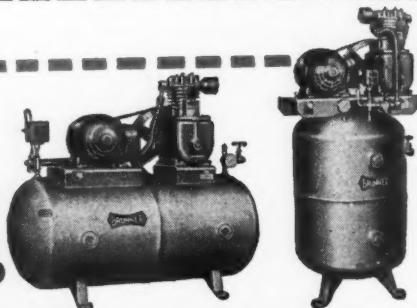
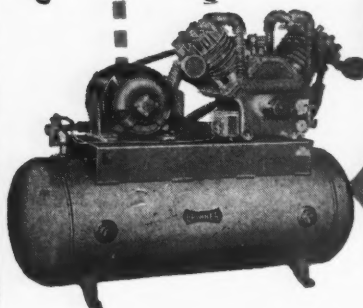
Here, actually, is the operating efficiency of an air compressor. The parts are few... assembly is relatively simple. It's what *you can't see* in these parts that is so vitally important in measuring the service worth of an air compressor...proven engineering, durability of metals and the watch-like precision of manufacture.

Before final selection of an air compressor, talk to a Brunner dealer. Ask for *evidence* of volumetric efficiency. Compare operating speeds. Get the *facts* on first cost, service life, dependability, operating economy. Make better use of air operated equipment...put Brunner Air Compressors on the job.

BRUNNER MANUFACTURING CO.
Utica 1, New York, U. S. A.

- Air power tools add to shop income. The Brunner Catalog suggests many applications and shows air required. Sent on request.

AIR COMPRESSORS
...a size and type for every purpose



BRUNNER
SINCE 1906

SINGLE STAGE $\frac{1}{4}$ HP. TO 2 HP.
TWO STAGE $1\frac{1}{2}$ HP. TO 15 HP.

432. Shock Booklet

The Briggs Shock Absorber Company is distributing a 20-page booklet giving information on how to sell shock absorbers. Humorously illustrated and quickly read, the book tells how to test for defective shocks, how to merchandise a shock absorber line, and gives basic selling information on Briggs shocks.

433. Battery Line

The Willard Storage Battery Co. announces the new line of Super Master batteries, featuring Metalex, a new grid metal claimed to



offer 100 per cent more resistance to overcharge. According to Willard, overcharge is the greatest single cause of battery failure. Other new features of this battery are a new current-producing active material composed of a special kind of lead oxide. The mate-

(Continued on page 120)

WE'LL HELP YOU SELL AMERICA'S FASTEST SELLING UNDERBODY COATING

Why YOUR CAR NEEDS
LION Nōkōrōde
UNDER-CAR SEALER AND SILENCER



Nōkōrōde Muffles Noises...Protects Against Rust

Only **Nōkōrōde** Contains **Silent-Tite***



*An ingredient that makes Nōkōrōde more adhesive, more cohesive, more dense, and a better sound-insulator.
It's good-bye to annoying squeaks and rattles when Nōkōrōde "blankets" the entire underbody of your car. And it's good-bye to rust and corrosion, too... because superior Nōkōrōde gives the underbody an unbroken "coat" with no opening for rust and corrosion to get a start.
For a really quiet ride... for real protection that lasts the life of your car. Insist on Lion Nōkōrōde—the superior under-car sealer and silencer made by Lion Oil Company.
Nōkōrōde is made from the finest selected asphalt by Lion Oil Company, one of the world's leading manufacturers of asphalt. Nōkōrōde is naturally black—no useless coloring matter added.

**Nōkōrōde is Guaranteed by
LION OIL COMPANY**



Made Under the Process of U.S. Patent No. 2,393,774

IT'S GUARANTEED!

WRITE, wire or phone
Lion Oil Company
today for Lion's complete, backed-by-advertising plan. It can bring you extra profits... in a hurry.

Nokorode sprays on thinner and dries faster because it is made in concentrated form. Actually, Nokorode forms a much tougher, more adhesive coating than other products which are applied two or three times thicker... so, with Nokorode, you save up to 1/2 your material cost per job! You profit more... because you use less material, yet get the job done faster, better and at lower cost. (Nokorode can be applied as thick as is recommended for competitive products, but

it's not at all necessary.)

Why is Nokorode superior? Lion's patented process makes Nokorode more adhesive, more cohesive, more dense, and a better sound insulator.

Made from the finest selected asphalt by Lion Oil Company, one of the world's leading manufacturers of asphalt. Nokorode is naturally black—no useless coloring matter added.

with
ADS
LIKE
THIS

IN THE
SATURDAY EVENING
Post
and
TIME

Full page advertisements like these in The Saturday Evening Post and Time pre-sell Nokorode to your customers... help you sell more Nokorode... make extra profits... faster!

LION OIL COMPANY, El Dorado, Arkansas

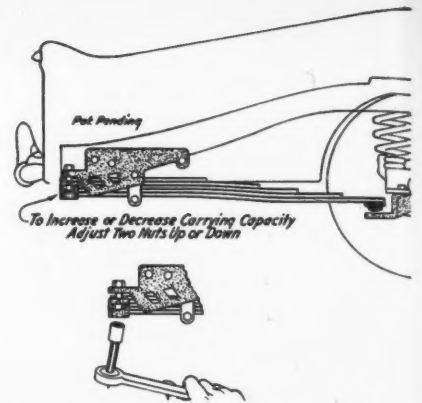
New Products Show Window

For further information use coupon on p. 65

rial is claimed to give quick starts in any kind of weather; the new sealing compound that locks permanently in place and prevents electrolyte leakage; and a spot rim rubber insulator said to be impervious to the burning, charring action of the high mileage, high charging rates of high under-the-hood temperatures.

434. Helper Springs

The Laher Spring & Tire Corporation has developed two new adjustable overload springs for use on cars and light trucks. These springs can be adjusted to meet the demands of weight or riding requirements. The springs have been designed in two types. The first fits all cars and trucks



with underslung rear leaf springs of 1½ in., 1¾ in. and 2 in. widths. The second type fits all cars with rear coil springs. It is claimed that the springs can be installed in less than an hour and that the correct tension for any load condition is obtained by adjusting 4 nuts up or down.

435. Window Latch

Champ-Items, Inc., announces the No. 477 ventilator window latch for all General Motors cars and other makes using this type latch. The manufacturer states that it can be installed in one minute.

436. Bushing Expander

Sunnen Products Company announces a new bushing expander designed to prevent bushing failures. This tool is used with any of seven expander mandrels for bushings in a diameter range of ¾ in. to 1½ in. Used with the
(Continued on page 122)

Why pay more for electrical test equipment?

NEW **KING** TESTING EQUIPMENT COSTS LESS... GIVES YOU MORE FOR YOUR MONEY!



Compare the new King line of electrical equipment with any other *regardless of price!* Point for point, King equipment gives you more for your money—gives you all the features you want most.

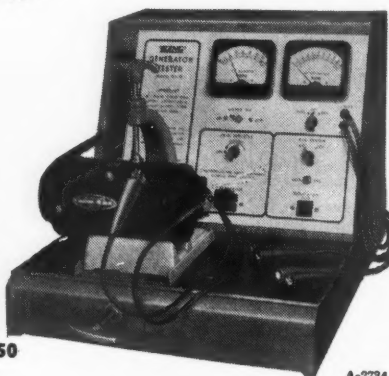
Before you buy, call your jobber for a competitive demonstration. Make an honest comparison and you'll see for yourself that new King products give you many exclusive features *nowhere else obtainable.* And King equipment costs less! Compare—and you'll see that King equipment is *your best buy from every angle.*

1. ENGINE TESTER. Built-in spark plug tester. 6, 12 and 24-volt ignition tests with engine running. Includes individual V-A-R (volt-amp-resistance) tester. No batteries; operates from any 110-volt outlet. Beautiful two-tone, baked-enamel Hammertex cabinet. **\$490.00**

2. DISTRIBUTOR TESTER. Brilliant firing pattern amplified by power pack. Calibrated for 6, 8 and 12 cylinders. Powerful worm-gear drive provides excellent slow-speed characteristics. Handles late Ford, Mercury, Lincoln. Specification roll-chart indexed by vehicles. Matching base cabinet available. For bench use: **\$345.00**

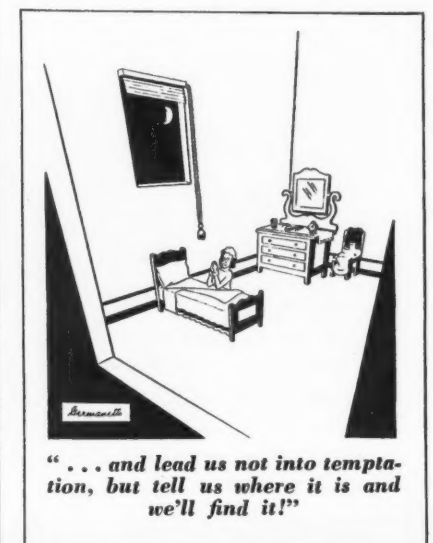


3. GENERATOR AND REGULATOR TEST STAND. Handles all 6 and 12-volt standard equipment belt-driven passenger car and light truck regulators and generators at rated output. Silent drive for detecting bad bearings or brushes. Attractive, matching Hammertex finish. **\$289.50**



KING Electrical Test Equipment

For free catalog write to: The Electric Heat Control Co.,
9123 Inman Ave., Cleveland 5, Ohio.





Exide has EVERYTHING

The GREAT NEW EXIDE BATTERIES that motorists want to buy

Powerful NATIONAL ADVERTISING support

SELLING AIDS that assure quick, easy, profitable battery sales

EXIDE SURE-START SERVICE

Battery SERVICE EQUIPMENT that's economical and easy to use

WITH EXIDE—YOU HAVE EVERYTHING—SEE THE EXIDE DISTRIBUTOR

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32 • Exide Batteries of Canada, Limited, Toronto

"Exide" Reg. Trade-mark U. S. Pat. Off.

WHEN IT'S AN

Exide

...YOU **START**

New Products Show Window

For further information use coupon on p. 65

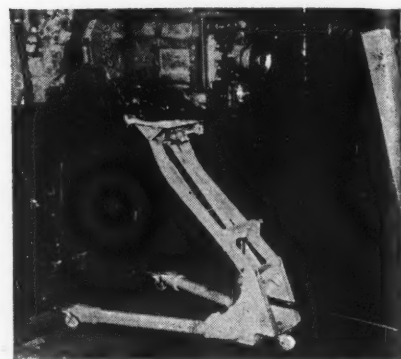
Sunnen Honing Machine, the tool is said to lock bushings firmly into rods, spindles and other parts. It is claimed to be especially useful on thin wall bushings, and is recommended for locking connecting rod bushings in place. Advantages claimed for the new bushing expander are that it makes the bushings conform to the contour

of the hole; keeps bushings from pounding out or coming loose from worn, rough or out-of-round rods; and insures 100 per cent contact for proper heat transfer.

437. Unit Lift

The Drum Jack Corporation has added a Unit Lift to its line of automotive equipment. The new

Drum Unit Lift has been designed by the engineers of the Cleveland Pneumatic Tool Company, of which Drum Jack Corporation is a



subsidiary, to meet the need for equipment that will enable one man to handle the heaviest truck transmission as well as lighter under-chassis parts. The unit can be used as a floor model or can be converted for use with a 2-post hoist model with the use of a special stand. According to the manufacturer, with the new Unit Lift one man can remove, install transmissions, differentials, universal joints, axles and so forth. Also, it can be used as a floor jack. The lift can be purchased with or without the hydraulic jack which powers it.

438. Block Repairs

Tincher Products Company has released a manual giving new techniques for repairing severe cracks in engine blocks and heads. The Tincher Process Crack Repair Manual is said to cover practically all classes of cylinder block and head cracks and breaks encountered in servicing internal combustion engines. A detailed step-by-step procedure is outlined for each type of repair accompanied by diagrams and illustrations.

439. Silicone Polish

Lusco Inc. announces a new auto polish containing water emulsified 6 per cent General Electric Silicone. The polish, which is named Lazy Man's Polish, has now the word "Sil-vize" added to its label. It is claimed to remove dirt, grease, and grime from the finish and to clean the surface without harming the paint.

(Continued on page 124)

Lifetime BÜNALON

THE DIAPHRAGM THAT ADDS FAME TO

KEM FUEL PUMPS



KEM adds fame to the finest Fuel Pump in the world . . . with the Lifetime Bünalon single layer diaphragm. This new Bünalon single layer eliminates destructive in-between multi-layer friction. It is coated with specially formulated Büna-N rubber which is highly resistant to practically every one of the most harmful materials that may be found in the fuel system. The Lifetime Bünalon diaphragm remains flexible under the most extreme motor conditions because it is fortified with specially woven nylon fabrics. An achievement in diaphragm construction. There is nothing finer than Lifetime Bünalon. Ask to see it!

- REPLACE • REPAIR
- REBUILD WITH KEM



KEM MANUFACTURING COMPANY, INC., FAIR LAWN, N. J.
FUEL PUMPS AND PARTS PREFITTED IGNITION PARTS



YOU CAN USUALLY SPOT A GOOD HUNTER BY HIS GUN

Take the man who is a crank about his gun ... won't settle for less than a famous "name" make ... Winchester, Remington, Ithaca, for instance ... and takes care of it like a baby. Ten to one he is a real hunter.

Take the man who is a crank about tools ... wouldn't give kit-room to anything less than a Bonney Wrench. Ten to one, he is a real mechanic. Yes, you can usually spot the real mechanic by his tools.

This is one of a series of spirited sporting scenes (in full color, without advertising) available on request. Write for your free set today.

"CHEAP TOOLS ARE FOR CHUMPS", say the men who know tools and how to handle them. That is why they insist on Bonney Wrenches. "Bonney" is the word for lightness, strength, balance and precision. "Bonney" means quicker, easier, better work, with greater safety.



BONNEY FORGE & TOOL WORKS, ALLENTOWN, PENNSYLVANIA

New Products Show Window

For further information use coupon on p. 65

440. Oil Tester

The Photovolt Corporation has developed the Photovolt Photoelectric Crankcase Oil Tester, designed to measure the light transmission of a thin layer of crankcase oil as an indication of its degree of contamination by carbon, metal, and other particles. Intended for gasoline and Diesel en-

gines, the readings serve to indicate, for instance, when the oil should be changed and how effective the oil filter is in keeping the oil low in contamination. A few drops of oil from the dipstick are sufficient for the test which can be carried out by anybody in less than a minute, according to the manufacturer. The tester can be



connected either to the AC power line or to an automobile battery. The instrument can also be furnished with a built-in dry-cell battery.

441. Catalog

The Chefford Master Mfg. Co. announces the issuance of its new 1950 Water Pump Catalog. The 8-page catalog lists water pumps, including 1950 models, for all popular makes of cars. The catalog contains alphabetical listings under each car, truck, tractor and bus classification. The pump number, year, manufacturers pump



number, type, repair kit number, and application are displayed. A numerical listing is also included. Illustrated above is the 1949-50 Ford water pump (bearing type).

442. Door Rubbers

The Durkee-Atwood Company has developed a new dispenser-package containing four types of molded sponge rubber door and trunk gaskets which are said to service the majority of cars and commercial vehicles. Identified as Molded Dor-Tite, this gasket is packed in standard shop-size lengths which are clutch-fed through a die-cut opening in the dispenser.



STOPPERS at the SHOW!



Wheel Cylinder Repair Kit



Master Cylinder Repair Kit



Individual Master and Wheel Cylinder Parts



Master Cylinder Assembly



Hydraulic Brake Fluid



Hydraulic Brake Pressure Bleeder



Brake Cable Assembly



Wheel Cylinder Assembly



Brake Parts Box



Recognized as the standard for replacement. Designed, manufactured, packaged and priced to meet the needs of service stations and distributors.

STEP ON YOUR BRAKES AT BOOTH NOS. C230-236!

Order from Your Jobber or Write Us Direct

EIS AUTOMOTIVE CORP., Middletown, Conn.



EIS

GET IT FROM YOUR JOBBER



CABLES
FLUIDS
PARTS

KITS
TOOLS
CYLINDERS

get your full share of profits—not just a part—

DELCO ALONE

OFFERS A COMPLETE LINE OF SHOCK ABSORBERS

Only Delco Offers the Right Type of Shock Absorber for 80% of the Cars! Delco—and only Delco—makes a *complete* line of shock absorbers. Single-acting, double-acting, knee-action or direct acting . . . Delco makes them all! Whatever type of shock absorber your customers need, you have it with the Delco line.

Only Delco Can Supply This Huge, Continuous Market! Over 65,000,000 Delco units are in use today. That assures you of a large presold market for replacement and repair. Then, too, *other* car owners are potential customers because Delco—and only Delco—builds shock absorbers to fit *every make of car!*

Only Delco Offers Such a Sales Opportunity! Delco's one line, one quality, one price . . . give you a greater-than-ever sales opportunity. Make Delco the choice for your customers. Make Delco your key to greater volume of shock absorber business.

LET THIS DELCO MERCHANDISER BOOST YOUR SALES

This sturdy, durable, all-steel merchandiser is designed to catch the eye of your customers . . . to give sales volume a lift. Put this display to work . . . let it promote new sales of shock absorbers for you. Your local United Motors distributor can supply you.



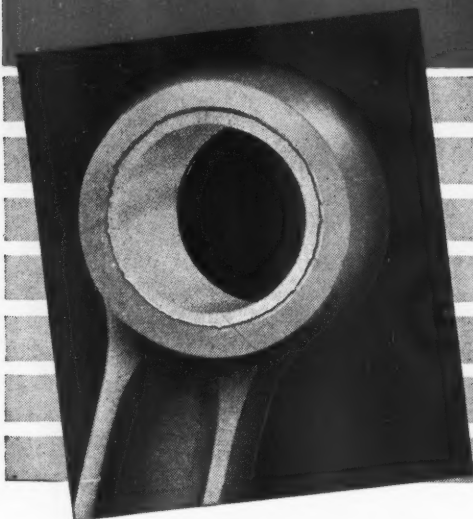
**DELCO SHOCK ABSORBERS—
A UNITED MOTORS LINE**
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS

DELCO *Hydraulic Shock Absorbers*

NEW

SUNNEN BUSHING EXPANDER

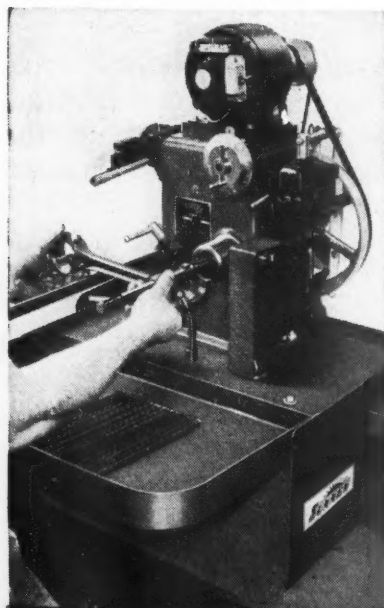
**Another Important Accessory
for Sunnen Honing Machines!**



**LOCKS
Thin Wall
Bushings
in Place**

**INSURES GOOD REPAIRS—
PROTECTS YOUR REPUTATION**

- ① Keeps bushings from pounding out or coming loose.
- ② Assures 100% contact for good heat transfer.
- ③ Gets full life from bushings.
- ④ Fast, Easy to use, Inexpensive.



AL-50 Expander Set handles popular sizes — includes Bushing Expander and three expander mandrels for $\frac{3}{4}$ " to $1\frac{1}{16}$ " pin diameter range. One Expander fits all expander mandrels. Complete range covers $\frac{3}{4}$ " to $1\frac{1}{2}$ " diameters.

Photo at left shows Bushing Expander in use on Sunnen Honing Machine. Here's an important addition to the long list of profit producing jobs done on this popular machine — such as PISTON PIN FITTING • CON ROD BUSHINGS • KING PIN FITTING • HYDRAULIC BRAKE CYLINDERS • and many other jobs from .480" to 2.625" in diameter.

SP-563

SUNNEN PRODUCTS COMPANY

7918 Manchester Avenue • St. Louis 17, Missouri

Canadian Factory: Chatham, Ontario

How Much Oil

Continued from Page 49

what lower oil consumption. This is generally true of worn engines where bearing and ring clearances are excessive as a result of wear.

Higher compression ratios put an added burden on the lubricating oil, particularly on its function as an important cooling medium. Higher pressures and temperatures mean more heat flowing into cylinder walls and pistons, with added heat transfer through the rods to the crankcase. Increased temperatures in the crankcase, particularly with engines of small capacity, can reflect in higher oil consumption. In newly designed high compression engines, they are designed for proper heat transfer.

The type and grade of the fuel used have an important effect on oil consumption. Combustion chamber deposits cause a sizeable loss in power, sometimes accompanied by pre-ignition as well as detonation. Both of these result in piston ring and engine damage soon reflected in higher oil usage.

Low grade or dirty gasolines particularly when used with unsuitable lubricating oils, result in sludging and varnish deposits. In as little as 5000 miles, these engine deposits can completely plug oil drainage openings, stick compression rings and make engine an oil pumper.



1951 Lincoln

Continued from Page 43

Mechanically both Lincoln and Cosmopolitan remain unchanged save for certain improvements in the engine. For one thing the cylinder block is being made with more alloy in the composition to increase cylinder bore durability. For the first time too Lincoln will balance the entire engine assembly in production. Selective fitting of all main bearings as well as hydraulic valve lifters also becomes standard practice in production.

Late in 1950 production Lincoln engines were fitted with three-ring pistons and this is continued in 1951. Some additional improvement in oil economy has been effected through the introduction of various drain holes.

Largely as a result of refinement and reduction of frictional losses the 1951 engine is rated at 154 bhp as compared with 152 previously.

Better distribution of cooling water to exhaust valves is effected by the addition of a distribution tube in the water passage.

Fuel pumps now incorporate a double-acting booster pump of increased capacity to improve windshield wiper operation.

The ventilation system has been refined and improved by using individual control for each of the ducts.

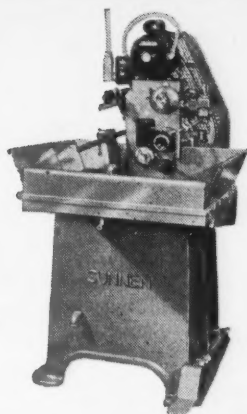
HydraMatic drive is being continued on Lincoln and Cosmopolitan models at extra cost.

Highway Budget

Federal aid for highway work will be held down to \$500 million for the two fiscal years ending June 30, 1953, primarily because the White House opposed any larger sum at this time. This is still \$50 million a year more than allowed for the past three years. The rough breakdown provides \$225 million for help on primary roads, \$150 million for secondary, and \$125 million for urban aid. Included in miscellaneous specified uses are \$17.5 million for forest highways, roads and trails; \$23 million for national parkways; \$10 million for defense projects; and \$5 million for highway disaster use.

THE SUNNEN EQUIPPED SHOP

Does a Better Job, Makes More Profits

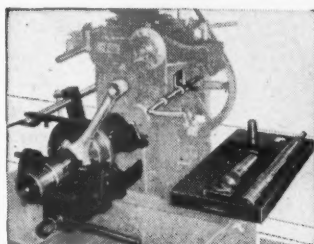


Floor-type, Heavy Duty Honing Machine — for fleet shops and engine rebuilding shops.

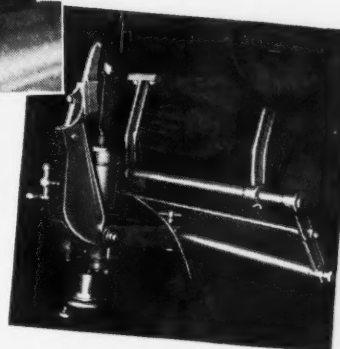


Rod Aligner—fastest on the market for checking bend, twist and offset. Your best insurance against comebacks.

Cylinder Grinder Outfit — for complete cylinder reconditioning or rehon-ing; assures fast, dependable service at lowest cost.



Bearing Sizer—Your complete bearing service. Bores main inserts; bores semi-finished babbitted rods; bores inserts in- or out of rods.



Crankshaft Grinder—The portable precision grinder — produces factory standards of accuracy. Handles rod journals in car, complete hafts in lathe. Write for bulletin.

Plus a Line of Service Tools
That Can't Be Beat for Making
Tough Jobs Easy

SEE YOUR
SUNNEN JOBBER NOW



SP-563

SUNNEN PRODUCTS COMPANY

7918 Manchester Avenue • St. Louis 17, Missouri

Canadian Factory: Chatham, Ontario

Are You Getting

1

The right Brake Material for
EVERY reline job — **BAR NONE**



Only
Gatke
Gives You

ALL 7



- 2 More Profit on every reline job.
- 3 Brake Liners that go on **FAST**—adjust quickly and bring repeat business.
- 4 More value per dollar for every kind of customer—those who want the **BEST**; those who want **SAFETY** at a Saving; and operators of Taxi-Cabs, Trucks, Tractors, and Trailers.
- 5 Personalized Colorful Advertising that helps you sell.
- 6 Simplified Catalogs that save your time.
- 7 Leadership in Brake Lining Development that gives you the **BEST THINGS FIRST**.

New
Progressive
BIG

**Gatke DUZ-ALL
SYSTEM**

"... the most important development for Brake Reline Shops since the invention of moulded automotive brake lining."

Don't overlook this one! The future of your Brake Lining Business is involved.

Ask your Gatke JOBBER

Gatke
A GREAT NAME IN BRAKE LINING

GATKE CORPORATION—Automotive Division

General Offices: 228 N. LaSalle St., Chicago 1, Ill.

Factories at Warsaw, Indiana and North Brookfield, Massachusetts

Illustrated is the new R-M plant at 1440 N. Lemon St., Anaheim, California (Los Angeles Area.)

Established in 1919 at Detroit, R-M is one of America's leading manufacturers of fine quality lacquers, enamels and undercoats for automobiles, trucks, farm equipment, appliances, and numerous other products of industry.



"How our Expansion Program will benefit you"

"We have purchased manufacturing and warehousing facilities at Anaheim, California to serve our West Coast customers, but *all* users of R-M finishes throughout the country will benefit from our increased overall capacity resulting from this expansion. Our California plant is expected to ease the strain on our Detroit operation, and obvious coast shipping problems will be automatically eliminated.

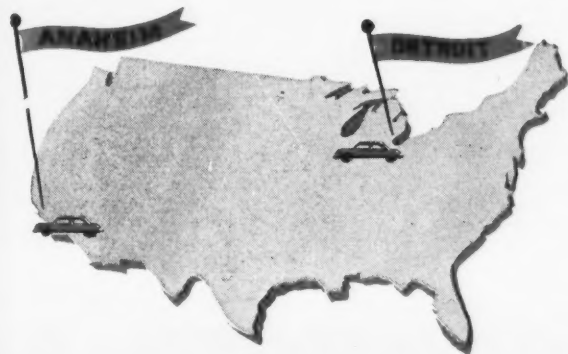
"All R-M users will continue to benefit from our 31 years accumulative experience in the scientific research and manufacturing of automotive and industrial finishes.

"You are cordially invited to pay us a friendly visit at Detroit or Anaheim, California."

L. G. Weed



FREDERICK G. WEED, President



Rinshed-Mason Co.

5935 MILFORD AVE.
DETROIT 10, MICH.



1440 N. LEMON ST.
ANAHEIM, CALIF.

here are the Auto Radios
that give you *top profit*

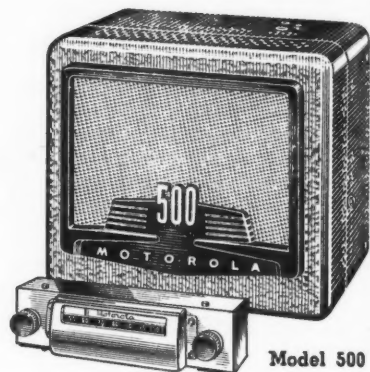
because they

Outsell

all others!



Model 400



Model 500



Model 600

it pays to feature

Motorola auto
radios

MOTOROLA INC., 4545 Augusta Blvd., Chicago 51, Ill.



Model 700



Model 800

CONTACT YOUR **Motorola** DISTRIBUTOR TODAY!

INDEPENDENT REPAIRMEN COUNT ON...

PONTIAC PARTS

Sign of
a Progressive
Independent
Repairman



GET THIS NEW PONTIAC WHOLESALE
PARTS
CATALOG!



Get your copy of this handy book today. It's a complete catalog of Pontiac Factory-Engineered Parts—produced especially for the wholesale trade. Ask for it at your Pontiac Dealer's parts department.

No one is more appreciative of Pontiac's fine performance, quality engineering and outstanding dependability than the Pontiac owner.

As an independent repairman you can capitalize on Pontiac's enviable reputation by using Factory-Engineered Parts on all Pontiac jobs—thus assuring your Pontiac customers of continued fine performance, dependability and economy. At the same time you save time and money through quicker, surer repairs and complete customer satisfaction.

You can be sure your Pontiac owners *know* you use Factory-Engineered Parts if you display the attractive three-color sign reproduced above. Your Pontiac dealer can get one for you.

KEEP YOUR PONTIAC OWNERS HAPPY WITH **PONTIAC** FACTORY ENGINEERED **PARTS**

*Sell the Battery
that's **EASIEST** to sell!*

DELCO
first in popular favor

Increase your battery sales the easy way. Sell Delco . . . America's No. 1 battery—chosen as original equipment for more new cars and trucks than any other make.

Capitalize on this tremendous nationwide popularity. Take full advantage of Delco's coast-to-coast advertising and promotion campaigns. Make sure your customers know *you* carry the battery they know about—Delco . . . the popular favorite for dependability, long life and value!

Stock Delco . . . display Delco . . . sell Delco. See why Delco batteries are the easiest to sell of all!



America's

No. 1

Battery

DELCO BATTERIES—A UNITED MOTORS LINE

Available Everywhere Through



United Motors Distributors



spend a minute
save a LIFE
GET A MINUTE
BRAKE CHECK NOW!

FOR SAFE SURE STOPS
American Brakeblok
BRAKE LINING

CHECK BRAKES NOW
spend a minute
save a LIFE

save a LIFE
CHECK BRAKES NOW

DO YOUR
BRAKES GRIND?
GRAB?
SQUEAL?

spend a minute
CHECK BRAKES NOW

IS YOUR
BRAKE PEDAL
SAFE?
DANGEROUS?

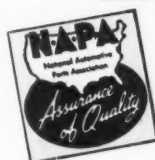
DOES YOUR
CAR PULL
RIGHT
OR LEFT?

Want to make More Money?

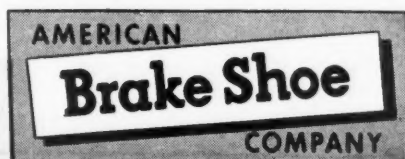
➤ Put this new American Brakeblok Program to work in your shop now!

NO DEAL! NO SPECIAL ORDER!

It sells brake jobs of all kinds—in *only a minute!* Finds extra business for you—*before pulling a wheel!* It's simple! It's easy! It's complete! If you haven't seen it call your NAPA Jobber at once!



American
REG. U. S. PAT. OFF.
Brakeblok
BRAKE LINING



AMERICAN BRAKEBLOK DIVISION
DETROIT 9, MICHIGAN



I'll bet you this time
he buys a Fiberglas
DOUBLE-INSULATED battery!

**Right, Mr. Dealer...
if you're ready to sell it**

If you display batteries that are double-insulated with Fiberglas* Battery Retainer Mats . . . if you tell the facts of their longer life . . . you'll find it easy to sell these top-profit batteries. And it's easier than ever today, because people are glad to pay a little extra to get longer battery life. Be sure you cash in . . . with Fiberglas double-insulated batteries. Owens-Corning Fiberglas Corporation, Dept. 50-K, Toledo 1, Ohio.

*FIBERGLAS is the trade-mark (Reg. U.S. Pat. Off.) of Owens-Corning Fiberglas Corporation for products made of or with glass fibers.



IS IN YOUR LIFE . . . FOR GOOD



HUDSON FOR '51 *Covers the Market!*

✓ 4 rugged series,
priced from just
above the lowest!

✓ A fabulous new car...
the Hudson Hornet!

✓ Unequalled loyalty and
satisfaction of more
than 400,000 owners of
"step-down" designed
Hudsons!

✓ A dealer franchise
that is the most
liberal and fairest
in the industry!

HERE, to the left, is the Hudson line-up for '51!—
A money-making, business-building line-up!
The smartest, most modern, most saleable mer-
chandise on any motor car row.

Prices start from just above the lowest, and range
through four great markets—with the Pacemaker,
the Super-Six, the Commodore and the fabulous
Hudson Hornet.

Your prospects can pick their price, choose their
power—and what a selling you can give them with
these '51 Hudsons! Unequalled roominess! An un-
matched ride! Outstanding performance! Impres-
sive safety!—They're all part of the great Hudson
story for '51.

And—there are still well-located Hudson dealer
opportunities! With the fairest deal in the industry
—with Hudson retail sales breaking twenty-year
records—the way is open for men who want to
build a sound business and steady profits!

Write, wire or phone C. A. J. Hadley, General Sales
Manager, Hudson Motor Car Company, Detroit
14, Michigan.

Get in with Hudson and get a deal that's a real deal!

HUDSON FOR '51

Priced From Just Above the Lowest

LOWER-PRICED
PACEMAKER CUSTOM

RENOWNED
SUPER-SIX CUSTOM

LUXURIOUS
COMMODORE CUSTOM

FABULOUS
HUDSON HORNET

THE BILLY ROSE SHOW
supports Hudson
dealers weekly on
coast-to-coast
ABC-Television

MORE AND MORE NEW CAR OWNERS CHOOSE NEW BLUE SUNOCO

The gasoline motorists say is the "best buy" on the highways is your "best buy" too. And that's NEW BLUE SUNOCO—the sensational high test gasoline that meets the high-compression needs of all cars...and the economy needs of all pocketbooks.



DODGE—"It takes a good premium gasoline to give reliable service 100 miles a day. That's what I average, and I find that New Blue Sunoco fills the bill." **THOMAS G. MANLEY, QUINCY, MASS.**



BUICK—"When I tried New Blue Sunoco in my 1950 Roadmaster, I got smoother performance, quicker get-aways, new anti-knock power." **LEONARD G. POLINOFF, PROVIDENCE, R. I.**



CHEVROLET—"I've never seen anything like a tankful of New Blue Sunoco for quick get-away—even on a long tough hill. When you put your foot down on the accelerator, you know what's going to happen." **HERBERT ARONOWITZ**



CADILLAC—"I've been getting better mileage since I changed to New Blue Sunoco. For my money it's a better buy than any of the premium gasolines I ever used." **ARSEN N. JAVIAN, WORCESTER, MASS.**



MEMO TO CAR DEALERS

Use New Blue Sunoco for top performance in your demonstrations...and to make sure the cars you sell keep on delivering top performance recommend to your customers that they use New Blue Sunoco—the high-test gas that sells at regular gasoline price.

HIGH-TEST PERFORMANCE AT REGULAR GAS PRICE

INDEPENDENT SERVICEMEN!

**KEEP YOUR
BUSINESS
GROWING!**



with genuine

Chevrolet Parts

One sure way to please your customers and keep your business growing is to use the very best parts in all repair work. We say: Use genuine Chevrolet parts. They're first-run quality parts and strictly dependable—backed by years of research and engineering skill. Use them and see how your name gets around as the place to go for a grade-A service job. Genuine Chevrolet parts are that good!

**Get Them
From Your Local
CHEVROLET DEALER**

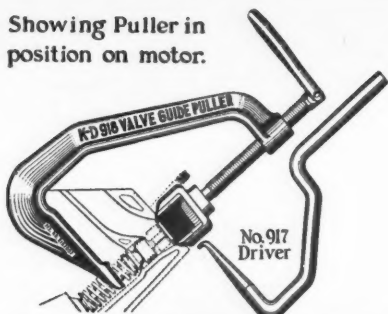


Your local Chevrolet dealer has a large, well-balanced stock of parts—and a thorough knowledge of service problems. Both ways, he can help you in your business and he's ready, willing and able to do it. Stop by and talk things over.

For your best deal... deal with your
CHEVROLET DEALER
Your Partner in Service

Hard jobs + K-D tools = EASY

Showing Puller in position on motor.



920 VALVE GUIDE PULLER SET for Ford V-8's, '32 to date*

No matter how tight assemblies are stuck they're up and out in minutes! First drive retainers out with 917 Driver; apply 918 Puller, and twist the handle. Easy! Use 923 Adaptor for 6 cyl. to '48.

*K-D 930, & 935 for '49-'50 Lincoln, big Ford Truck. Use K-D 700 for 6 cyl. after '48.



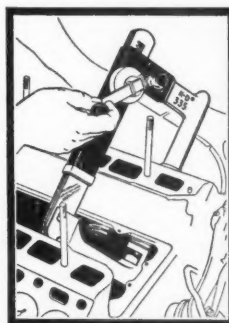
608...a NEW KIND of valve keeper INSERTER! For small size keepers used in these models:

Buick, Cadillac, Chrysler, Dodge, DeSoto, Plymouth, Hudson, Kaiser-Frazer, Olds, Packard. A must for '49-'50 Ford-built motors! Easy loading, self supporting on valve stem. Long enough to reach remote valves on Chrysler motors, thin enough for Fords. 8" long.



875 PISTON RINGER removes, installs rings. Saves fingers.

Handles all makes, types, sizes rings up to 4" diam. Saves fingers, doesn't twist or stretch rings. Illustration left above: gripping ring to install it. Right: installing or removing. Handy, pocket size. Correct tool for the job.



337 COMPRESSOR SET for Cadillac, LaSalle V-8 since '35

Set includes 335 Compressor and 336 Valve Keeper Inserters. With set, one mechanic can remove and replace all

valves without walking from side to side for each valve. Unique brake provides positive locking at height desired. Sturdily constructed. Internal gear and rack for safety, power, durability. Retainers replaced with 336, entered thru lower jaw opening. A lifetime tool.



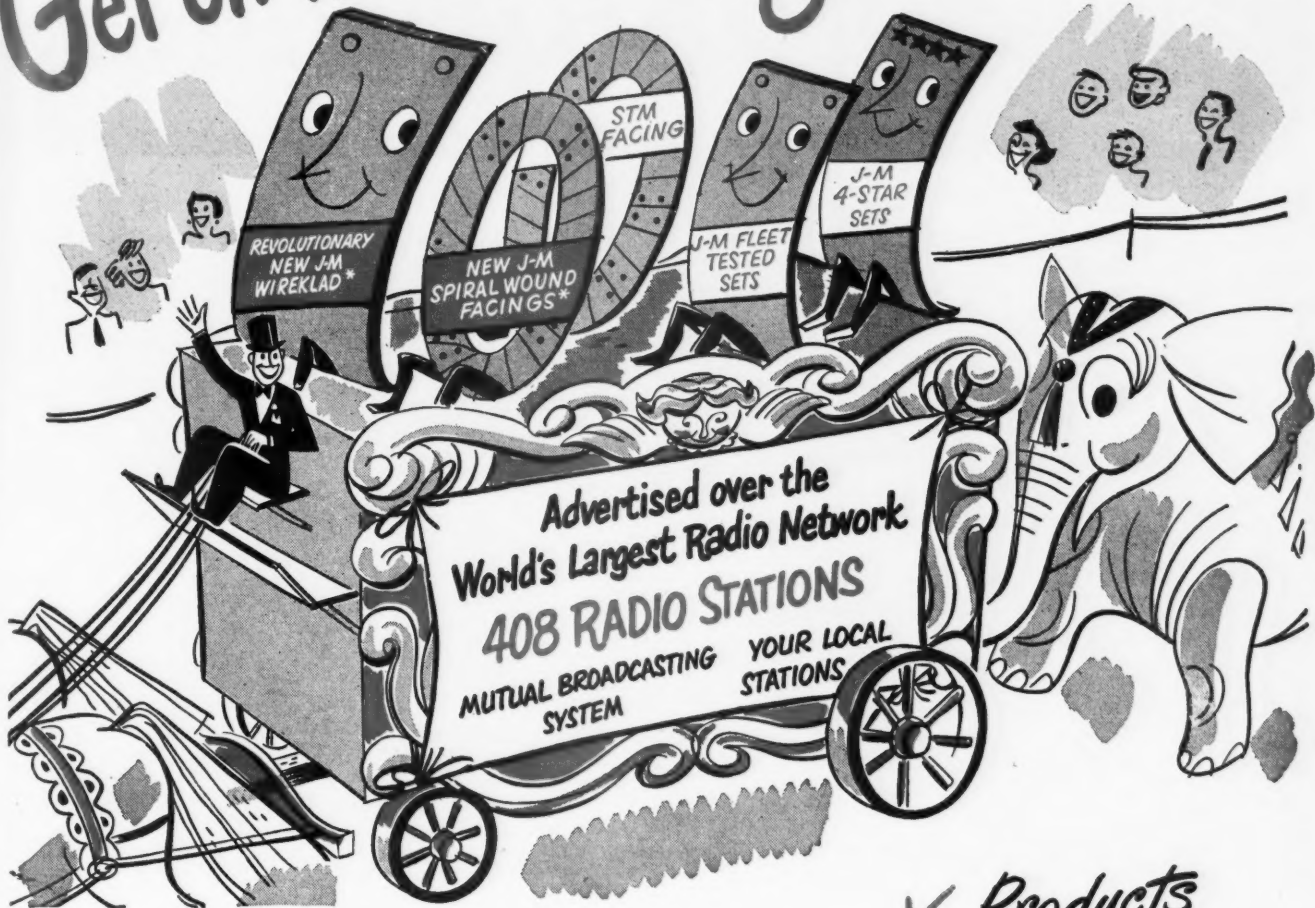
VACUUM CUP GRINDERS... for hand grinding valves

For Ford built and other motors using flat head or unslotted valves. K-D 503, cup dia. 1 3/8". K-D 505 (Dual cups) 1 1/8" and 1 3/8". K-D synthetic rubber Adaptors for mechanical grinders: 503 (metal retaining ring) 1 3/8" dia. cup; 507, 509 (plain cups) 1 1/8", 1 3/8" dia.



K-D MFG. CO. ——— LANCASTER, PA. ——— HAMILTON, ONT. ———

Get on the Band Wagon!



**Johns-Manville jobbers now have
the best there is for dealers**

✓ Products
✓ Promotion
✓ Profits

Results of nation-wide survey confirm new business-building features for dealers in expanded J-M friction materials line

Here's everything you need for a bigger and better year in brake linings . . . based on a Johns-Manville conducted nation-wide survey of leading jobbers to determine just what *dealers* require for new sales opportunities and increased profits in brake materials for 1950!

Here it is: Important improvements in brake and clutch products; streamlined new shoe exchange plan for bonded-on linings; attractive, new sales-help literature; more local stations added to the largest radio program of any brake lining manufacturer . . . and many other new ideas that make this the soundest friction

material program ever offered!

For example, there is the new WireKlad lining—an improved brake lining development with an exclusive, revolutionary new wire reinforcement. Also, another new item, the finest looking, better performing Spiral Wound Clutch Facing—that was developed by Johns-Manville for making clutch servicing easier, faster, more profitable.

It will pay you to write Johns-Manville today or get in touch with your Johns-Manville distributor. Get the details of this new, bigger and better Johns-Manville friction materials program for 1950—address Johns-Manville, Box 290, N. Y. 16, N. Y.

"Bill Henry and the News" Mutual Broadcasting System 8:55 P. M. Monday through Friday.



**NEW . . .
WireKlad linings and
Spiral Wound facings!**

These two important new products star in the expanded Johns-Manville line for 1950! WireKlad is the newest and most revolutionary development in brake manufacture and highly stable performance.

Spiral Wound facings give drivers the amazing new "cushion" clutch action, plus the lowest rate of wear. They have excellent appearance; are easy and economical to install!

Johns-Manville

Asbestos

The **FIRST** name in asbestos brake linings
"Get It From Your Jobber"

FRICION MATERIALS

REPLACE
WITH THE
O.E.*
LEADER!

MORaine ENGINE BEARINGS



Complete Line FOR ALL POPULAR MAKES OF CARS AND TRUCKS

All General Motors cars and trucks specify Moraine engine bearings as original equipment. And Moraine, the original equipment leader of the industry, makes available replacement bearings not only for the entire General Motors line, but for all other popular makes of cars and trucks. Use Moraine engine bearings for replacement! You'll find their high quality and long life are your best assurance of customer satisfaction. Moraine engine bearings are distributed everywhere by United Motors Service.



MORaine BEARINGS
A UNITED MOTORS LINE
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS

MORaine OFFERS ALL THESE:

ALL TYPES FOR ALL VEHICLES—The Moraine engine-bearing line includes most of the country's 35 to 40 million motor vehicles.

GENERAL MOTORS APPROVED—Moraine makes the only original-equipment bearings on the market for all General Motors cars and trucks.

DUREX-100—The famous Moraine bearings used by Oldsmobile, Buick, Cadillac, GMC trucks and others—the only replacement bearing of its type.

STANDARD TYPE—Steel-backed babbitt-lined replacement bearings for all popular cars and trucks.

OLD AND NEW MODELS—There are Moraine bearings for all General Motors vehicles, and many others, dating from 1935.

*O.E.—original equipment

MORaine PRODUCTS
DIVISION OF GENERAL MOTORS
CORPORATION, DAYTON, OHIO



in the long run . . .



you make more money . . .



and more friends . . .



when you sell the BEST!

PEAK® (PERMANENT) ANTI-FREEZE . . . \$3.50 gal.

NOR'WAY® (ECONOMY) ANTI-FREEZE . . \$1.25 gal.

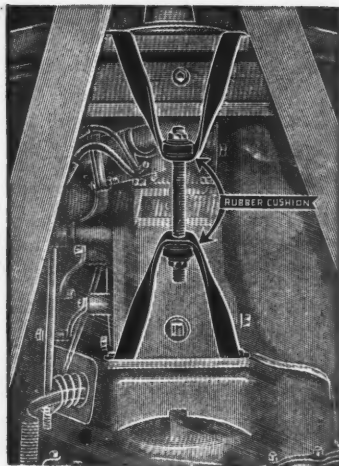
FREE SALES KIT! Here's a sales kit with just one goal in life—to help you sell! Window posters, post cards, tips on display—all carefully planned to back up Peak and Nor'way national advertising with solid point-of-sale support. You get your Salesmaker Kit **FREE** when you order!

*write your
jobber
today*



COMMERCIAL SOLVENTS CORPORATION
Specialties Division

17 East 42nd Street, New York 17, N. Y.



No. 581 CLUTCH CHATTER TIE ROD for 1949-50 Ford and Mercury. Eliminates clutch chatter. Can be installed in a few minutes. Rubber cushion provides a means for later adjustments. List \$4.00 per set.

No. 404K UNIVERSAL SPEEDOMETER CABLE REPAIR KIT for all cars and trucks. This kit contains sufficient cables to make approximately 25 units, also squaring tool, gauge and collar.

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No. 952-3C CARBURETOR RETURN SPRING DISPLAY CARD with 12 springs No. 952 for Chevrolet cars List 15c each, and 12 springs No. 953 for all cars List 25c each. Positive throttle return.



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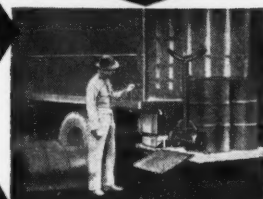


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GIVES YOU A CHOICE...**

SAVE HANDLING TIME

GENERAL PURPOSE TYPE Gate used with or without DETACHABLE ramp for general commodity handling (diapers to dynamite)... "Level Lift"... Safety toe clearance... Non-Slip surfaced" aluminum alloy gate floor. Choice of New Spring "Powered" or "Hydro Power" closing.



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RAMP TYPE has ramp attached for wheel-on loading of bulky items. Anthony "Lift Gates" can be stopped at any elevation. Exclusive safety features, speed, and light weight identifies the Anthony Lift Gate. Choice of New Spring "Powered" or "Hydro Power" closing.



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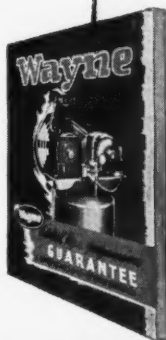
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Please send us without obligation ☐ Catalog of Wayne Air Compressors; ☐ Folder on Single or Two-Post Hoists; ☐ Hose Reel Bulletin; ☐ Gasoline Pumps.

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Every single step in making top-quality safety glass is a critical one. Take for example, the point at which the pieces of glass and the sheet of plastic are assembled into a "sandwich" that will become L·O·F Hi-Test Safety Plate Glass. Think how a stray hair or a speck of dirt in the sandwich would look in the finished product! The right moisture content in the plastic is important, too.

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3. Better strength for safety
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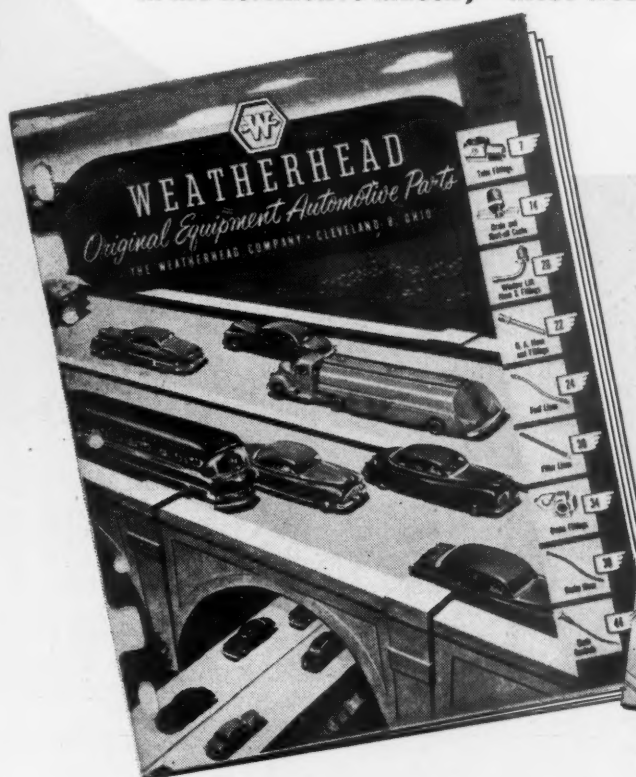
That's why L·O·F Hi-Test is the best Safety Plate Glass you can get—*anywhere*. Libbey-Owens-Ford Glass Company, 8115 Nicholas Building, Toledo 3, Ohio.

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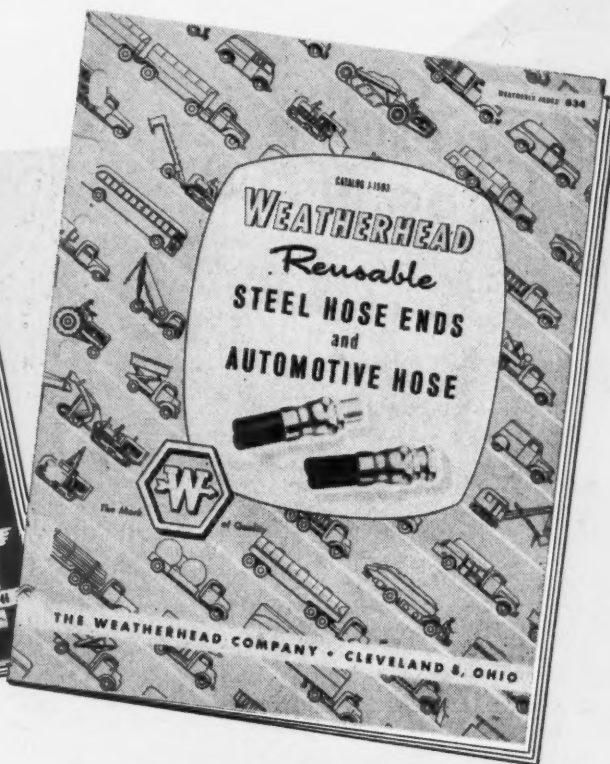


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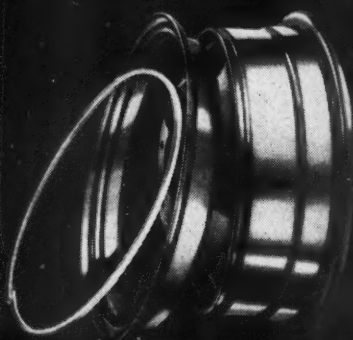
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Advanced Design

3 pc. Truck Wheel

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Hailed by truck manufacturers and tire servicing men as the safest ever devised! As tire is inflated the retaining ring locks the assembly even tighter. Also assures greatest convenience in tire mounting, demounting, and tube insertion!



Available in all popular sizes for leading makes of trucks to increase tire mileage 20% to 50%!



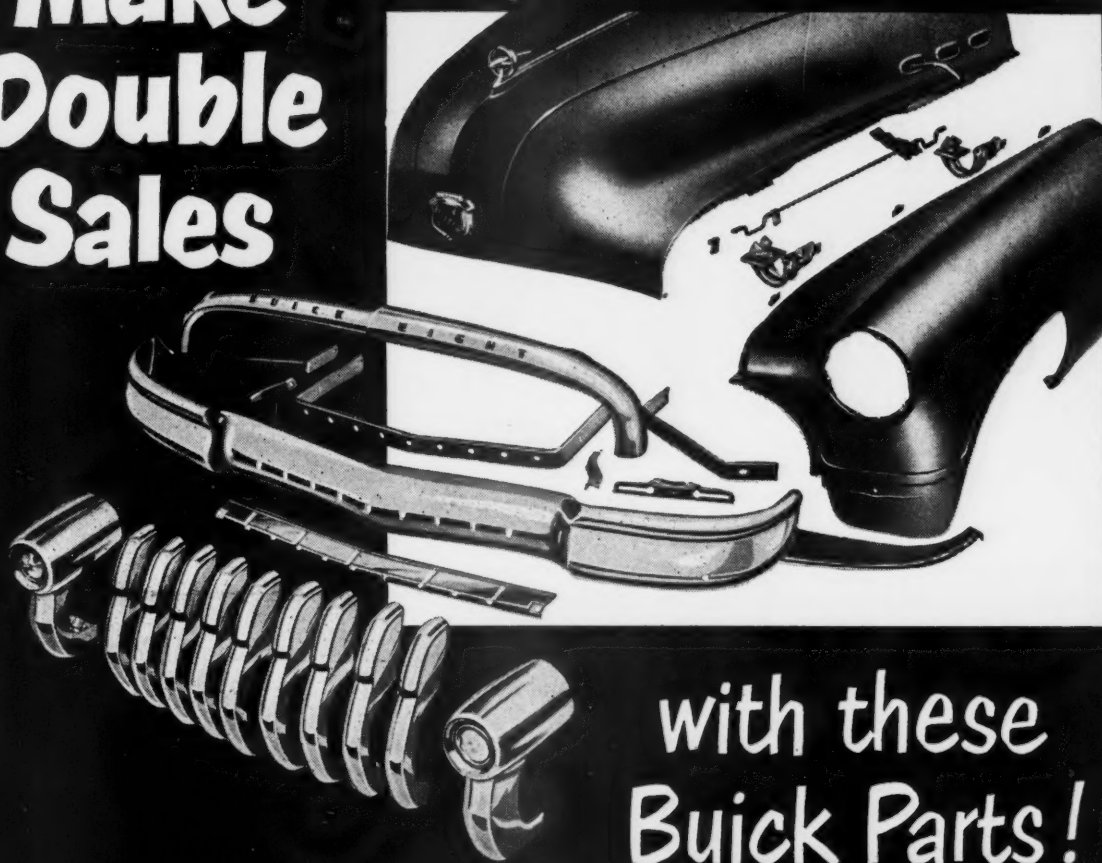
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NEXT time you have a Buick body job in your shop, remember there's an easy way to do it faster—and *make two profits instead of one.*

Why spend a lot of time bumping out, straightening, soldering, filing, grinding and lining up—then bill for your labor alone?

Instead, you can remove the damaged part, put a new one on—and *make a profit on both labor and parts.* It's quicker. It gives the owner a better job. It lets you handle more jobs per day in the same

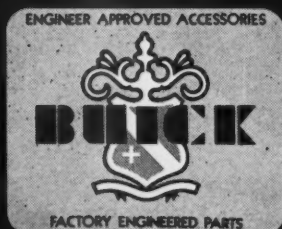
space. And you've made two sales instead of one!

Get your Buick sheet metal or body parts from your Buick dealer—his prices are right at the competitive level, and there's a full discount to the trade.

Matter of fact—you'll do better every time if you make the Buick dealer your first point of call for all Buick parts, every time. You'll find—

- **Low competitive prices** • **Full trade discount**
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- **Handy one-stop service**

Do a quicker
better job—



See your Buick dealer

with Buick parts

"who makes it"

makes
the
difference



Not even the experts can tell—just by looking—how good an engine bearing is, or how it will stand up.

The final buyer can't be expected to know the difference between good and bad bearings. He looks to the service garage; the garage looks to the jobber, the jobber to the distributor, the distributor to the factory.

How are you to know you are getting the best? Your only protection is the name and reputation of the maker. Yes—"who makes it" makes the difference.



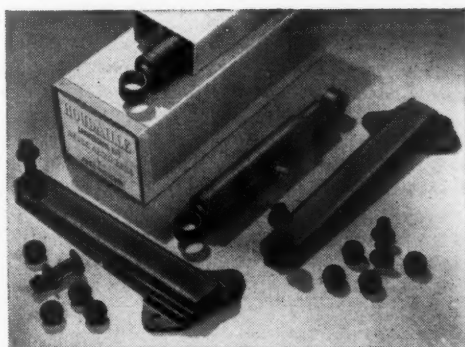
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replacement bearings for 25 years.*

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Get rid of the Headache
**SELL HOUDAILLE* Direct-Action
 CONVERSION KITS**



HOUDAILLE Direct-Action CONVERSION KITS

For over 5,000,000 Fords and Mercurys produced from 1935 to 1948.

For over 4,000,000 Chevrolets produced from 1939 to 1948.

Packaged in pairs for complete front or rear application with detailed instruction drawings and all necessary parts for installation without redrilling frames or other complications.

● Houdaille Conversion Kits combine America's finest direct-action shock absorbers with scientifically designed brackets and fittings that are more than strong enough to withstand the hardest service.

Where strength is most needed, Houdaille uses drop forgings in place of the usual stampings or castings. Mounting brackets are of extra heavy gauge metal. Instead of being butt welded, mounting studs go all the way through the fittings and are welded on both sides. These *exclusive* features are just a few of the reasons why you can be sure that Houdaille Conversion Kits will give your customers dependable service without readjustments or complaints.

Look at the sales opportunities Houdaille Conversion Kits give you. Think of the additional markets for Houdaille Rotaries, Direct-Actions and the famous Huskys. Consider Houdaille quality and dependable life. You'll see why distributors say that Houdailles are the key to maximum shock absorber profits.

HOUDAILLE - HERSHEY CORPORATION

HOUE ENGINEERING DIVISION

BUFFALO 11, NEW YORK

America's Pioneer Builder of Hydraulic Shock Absorbers

** Say
 Hoo-dy-o*

A CHILTON Publication



MOTOR AGE

EXECUTIVE OFFICES: CHESTNUT AND FIFTY-SIXTH STREETS · PHILADELPHIA 39, PA.

Dear Motor Age Reader:

Your opinion as a reader of MOTOR AGE is most valuable to us. It will guide the Editors in preparing the magazine and aids them in digging out the information you want!

To help us, we need your advice now. Please check the two simple questions given here and mail this letter to my personal attention in the enclosed prepaid return envelope, today.

1. WHICH OF THE FOLLOWING FEATURES DO YOU READ
READ Regularly

2. HOW CAN WE MAKE MOTOR AGE MORE INTERESTING AND MORE VALUABLE TO YOU?

Send it weekly!

"SEND IT WEEKLY!"

The editors of MOTOR AGE never stop making a continuing study of readership of MOTOR AGE.

Every month they send questionnaires to 1,000 paid subscribers asking the two questions shown above.

This is not an advertising stunt. It is a conscientious effort on the part of Frank Tighe and his staff to know *all the time* what their readers read most and prefer.

Occasionally, though, there's one the advertising department can't overlook.

The subscriber who in answer to the question "How can we make MOTOR AGE more interesting and more valuable to you?" said "SEND IT WEEKLY" expressed in an advertising headline the more homespun "It's OK as it is," "Give us more of the same," etc., which comprise such a large proportion of all the answers every month.

MOTOR AGE readers like MOTOR AGE. That's why they renew their subscriptions in a higher percentage than the readers of any other monthly automotive service magazine.

Reader interest helps make advertising pay in—

MOTOR AGE

Is one of 4 CHILTON Automotive Publications—the others are:

COMMERCIAL CAR JOURNAL

• AUTOMOTIVE INDUSTRIES

• CHILTON Automotive BUYER'S GUIDE

Come to Automotive Headquarters

DE SOTO

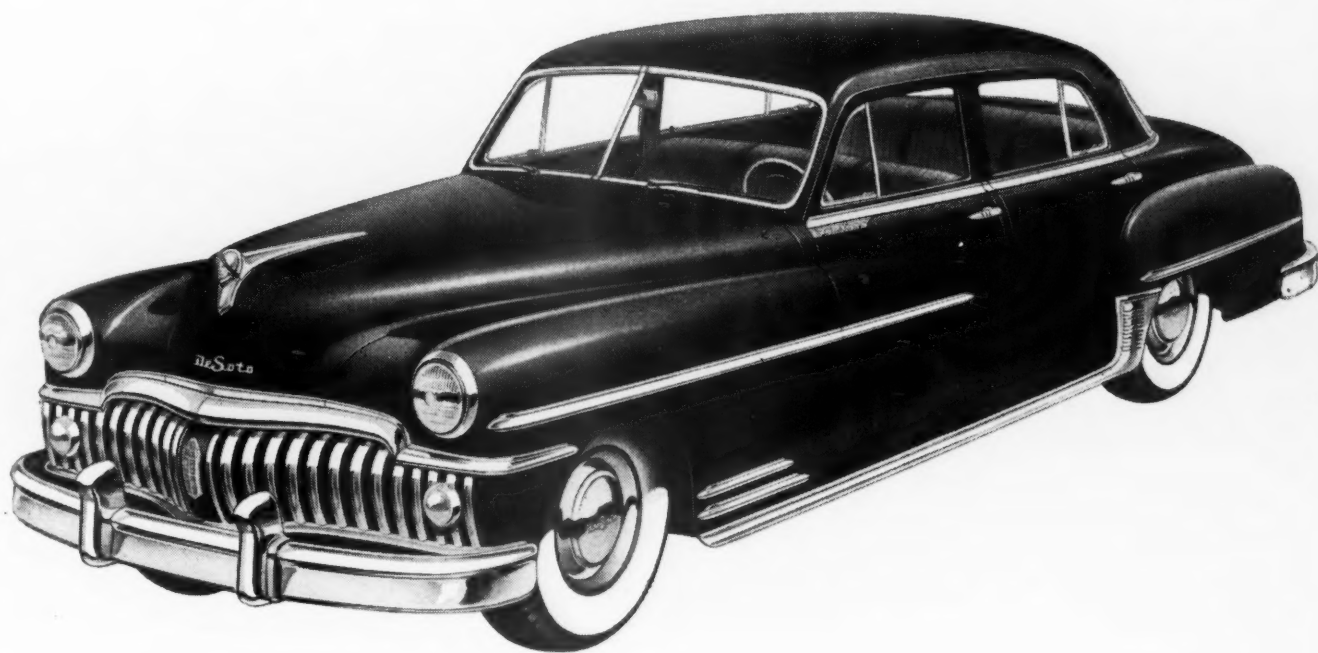
The car that lets

you drive without shifting! DeSoto Tip-Toe

Hydraulic Shift with Fluid Drive is still

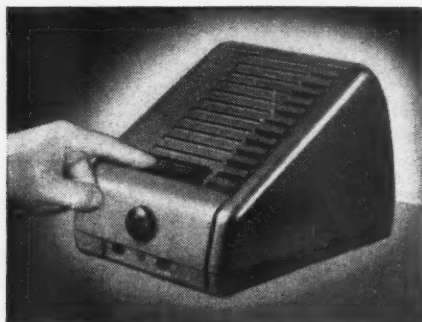
another reason why DeSoto owners say,

“Regardless of price...best car I ever owned!”



Don't miss GROUCHO MARX in "You Bet Your Life" on both radio and television (NBC networks) presented by De Soto-Plymouth Dealers. DE SOTO DIVISION, CHRYSLER CORPORATION

Don't Walk... *TALK!*



THE **NEW** EXECUTONE INTERCOM

**Saves steps, increases
output, cuts costs!**

Compute the cost of time wasted by executives and employees running back and forth. *That's how much the NEW Executone Intercom can save you!* Your voice—with lightning speed—gets information, gives instructions. Your employees accomplish more, too, with inter-departmental communication. "Inside calls" no longer tie up telephone lines. Office and plant operate at a new peak of efficiency!

**Years ahead of its time
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"CHIME-MATIC" Signalling announces calls with a soft chime and signal light, saves time on every call. New switching circuits for every need make new savings possible. Voices are clearer, distinct, instantly recognizable. Inexpensive 2 station system easily expanded. See it—no obligation. Just mail the coupon.

Executone

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415 Lexington Ave., New York 17, N. Y.

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- ☐ The name of your local Distributor
☐ Complete descriptive literature

NAME.....

FIRM.....

ADDRESS.....CITY.....

Hudson "Hornet"

Continued from Page 39

drive remaining as optional equipment on the Super and Pacemaker series.

Although Hydra-Matic drive is available on only these two top lines, it is known that if enough units were available they would be offered on all models and plans are in the works to make any changes necessary to accommodate Hydra-Matic throughout the line if and when it is available.

Exterior changes are confined principally to a more open type grille which flares out further towards the fenders, integral parking lamps, and changes in ornamentation at the side and rear. The rear window now is one piece construction with an area of 863.4 sq. in.

The instrument panel has been changed by regrouping the instruments on a raised chrome panel directly in front of the driver, easily visible through the steering wheel. Considerable improvement also has been made in reducing glare on exposed metal surfaces. The designers have paid a great deal of attention to color in interior design, and appearance has been greatly improved by use of contrasting colors and materials.

Ford Truck Engines

Ford is using auto-thermic aluminum pistons in all its six-cylinder truck engines. The piston has a steel strut to control expansion, permitting closer tolerances in fitting and is said to give longer ring life, less oil consumption and reduced cold engine piston noise.

HAVE YOU A JOB FOR A TRAINED MECHANIC?

We have a number of alert young men who have completed intensive training in Automotive Mechanics, Automatic Transmissions, and Body-Fender Rebuilding. They learned their trades thoroughly by working on actual equipment under personal, expert supervision. If you need a trained man, we invite you to write for an outline of our course, and for a prospectus of the graduate. No fees, of course. Address:

Placement Manager, Dept. P102-11

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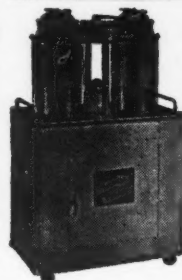


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Good
Tools!*

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Makers of Nationally Advertised DURO Power Tools



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**COOLING SYSTEM
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Original Replacement Switches

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DREW Ameroid Carburetor and Parts Cleaner

It's New! It's Better!

It brightens and polishes as it cleans!

Automotive Division

E. F. DREW & CO., INC.

15 E. 26th St.

New York 10, N. Y.



Offices and Warehouses in principal cities

Chilton's MOTOR AGE, NOVEMBER, 1950

When you sell G-E headlamps, use these 7 facts to sell more!

WHAT ABOUT LIGHT OUTPUT?

1 General Electric *all-glass* sealed beam headlamps have no inner bulb. Inner bulb absorption and transmission losses are eliminated. You get more light for the same wattage with *all-glass* lamps.

CAN ANY DIRT, AIR, OR MOISTURE GET INSIDE?

2 Positively not! The glass lens is fused to the glass reflector. No gasket is required in *all-glass* headlamps.

HOW DO FILAMENTS HOLD UP?

3 Lead-in wires in *all-glass* headlamps can be made big enough to be split lengthwise, insert filaments and clamp them in a vise-like grip. Vibrations and bumps can't jar filaments loose.

WHAT ABOUT LENS BREAKAGE?

4 G-E *all-glass* sealed beam headlamps are made of hard "oven-glass"—to resist breakage from stones.

DOES LIGHT FALL OFF AFTER A FEW MONTHS?

5 The average G-E *all-glass* headlamp gives as much light at end of life as when it was brand new. It does not grow dim!

DO THEY FIT ALL CARS?

6 You can replace any kind of sealed beam headlamp with a G-E *all-glass* sealed beam headlamp.

DOES GENERAL ELECTRIC MAKE A "BULLSEYE" TYPE LENS?

7 *All-glass* headlamps have no inner bulb to obstruct reflector surface—there's no need for a bullseye in the lens.

IT PAYS TO SELL G-E AUTO LAMPS!



GENERAL  ELECTRIC

KEN-TOOL
4-WAY RIM
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They're built stronger
to last longer...forged
from only the highest
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Largest Exclusive
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TO BUY THE BEST! BUY:-
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SOUTHERN FRICTION MATERIALS CO. CHARLOTTE, N.C.

America's No. 1 Hot Water
Car Heater
Arvin
UNIVERSAL MODEL 200
Recirculating type—fits most
makes of cars and trucks.

MODEL 300
Fresh-air type—tailor-fitted for
1949-50 Chevrolets, Pontiacs.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, AND CIRCULATION REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code Section 233)

Of CHILTON'S MOTOR AGE, published monthly at Philadelphia 39, Pa., for October, 1950.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, G. C. Buzby, East Sunset Ave., Chestnut Hill, Philadelphia 18, Pa. Editor, Frank P. Tighe, 1017 Drexel Ave., Drexel Hill, Pa. Managing editor, Charles M. Kenyon, 600 Pine St., Royersford, Pa. Business manager, G. C. Buzby, East Sunset Ave., Chestnut Hill, Philadelphia 18, Pa.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Chilton Company, Chestnut & 56th Sts., Philadelphia 39, Pa.

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3. The known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

G. C. BUZBY, Publisher
Sworn to and subscribed before me this 25th day of September, 1950

PHILIP J. SHIRE, JR.
(My commission expires January 7, 1951.)
[SEAL]

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The
ignition
terminal
that fits
ALL
spark plugs.



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BURNDY, New York 54



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COST-per-MILE
with BEAR!**

Increase tire mileage, cut accident costs! Make or get Bear Tests for Dy-Namic Wheel Balancing, use Bear Alignment, Straightening Equipment; the leaders do! BEAR MFG. CO., Dept. M-1, Rock Island, Ill.

1736

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INDIANAPOLIS
"Measurably Better"
SPRINGS

SERVICE SPRING COMPANY
INDIANAPOLIS 6, INDIANA

FOR ENGINE BEARINGS
CLUTCH PLATES AND PARTS
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TRADE MARK
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**BIGGER PROFITS
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OIL-CUE**

THE ONLY AUTOMATIC OIL-LEVEL SIGNAL
PARKWOOD MFG. CO., CLEVELAND, O.

Automotive Replacement Sales
FRANK A. NEALON ASSOCIATES
Factory Equipment Sales
GARBISCH-EDGINGTON, INC.
2111 WOODWARD AVE. • DETROIT 1, MICH.

How does this ad concern you?

Sure, the trucks are important, if you handle them.

But so are the plane, the boats, the locomotives and the bus.

This latest GM "Key" advertisement demonstrates how far GM ranges in its search for better power. It is running in full color, usually as a two-page spread in national magazines—telling your customers a lot about GM's skill in putting power to work.

In short, it's another convincing example of the fact that when it comes to power, you had better come to a product made by GM.

packages

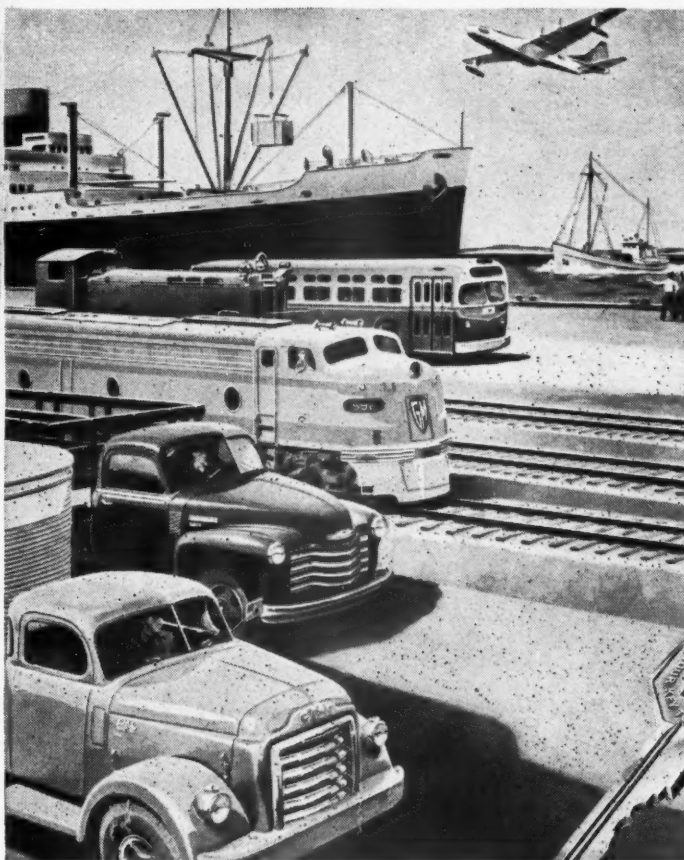
stack well in freezer? If they are the packages falling. Also, the stacks, making the food more

maximum use of freezer space. Angular or square containers are round containers. If you are in important consideration

er's first fruits and vegetables. A more tender spinach obtained in spring than in winter. 1. Cut when leaves are tender. 2. Wash thoroughly in running water to rid leaves of dirt. 3. Steam-blanching in greens since leaves are so water-blanch about a time for 2½ minutes. Basket or colander up to boiling water containing matting and assure uniform cooking. Clock blanching in time water reaching vegetables have been in cold water for at least 10 minutes. 5. Squeeze out excess water. 6. Package in any type of freezing container.

Peas Then as Huxley is difficult for freezing. From new variety which is common in regions where they may be difficult to grow. Any deep green, large-garden variety will give frozen product. 1. Do not freeze odd size. Tender, slightly immature are better for the freezer. 2. Pod 4 or 5 pounds. Do not wash after podding. 3. Water-blanch about a time. The time depends on size of pea. Blanch small peas 45 seconds; large peas, 1½ minutes. If you prefer to steam-blanch, small peas will take 10 minutes; large peas, 20 minutes. 4. Chill immediately in running water. 5. Fill any type of vegetable container (full, clean, label. Freeze immediately.

WATER HONES & GARDEN



THIS PICTURE SHOWS WAYS IN WHICH GM SERVES TRANSPORTATION WITH THRIFTY POWER

- GM's Allison Turbo-Prop and Turbo-Jet Engines**
 - power new U. S. military planes
- GM Diesel-Powered Ship**
 - example of Diesel power on larger seagoing vessels.
- GM Diesel-Powered Fishing Boat**
 - typical of the maritime workhorses run on Diesel power.
- GM Diesel Coach**
 - a familiar sight on city streets and highways.
- GM Diesel Switching Locomotive**
 - workhorse of the yards.
- GM Diesel Locomotive**
 - for all services on American railroads.
- New Chevrolet Truck**
 - 82 models, 9 wheelbases. A truck for every hauling need.
- New Diesel-Powered GMC Truck-Tractor**
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The Key to a General Motors Car
Your Key to Greater Value



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NO BRUSHING
NO SCRAPING
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- Saves man-hours and helps keep employees. Mechanics have less sinus, headaches, etc.

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F.O.B. Decatur

\$187.50

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Illustration shows standard kit with two extra tube outlets.



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THE NATIONAL SYSTEM OF GARAGE VENTILATION

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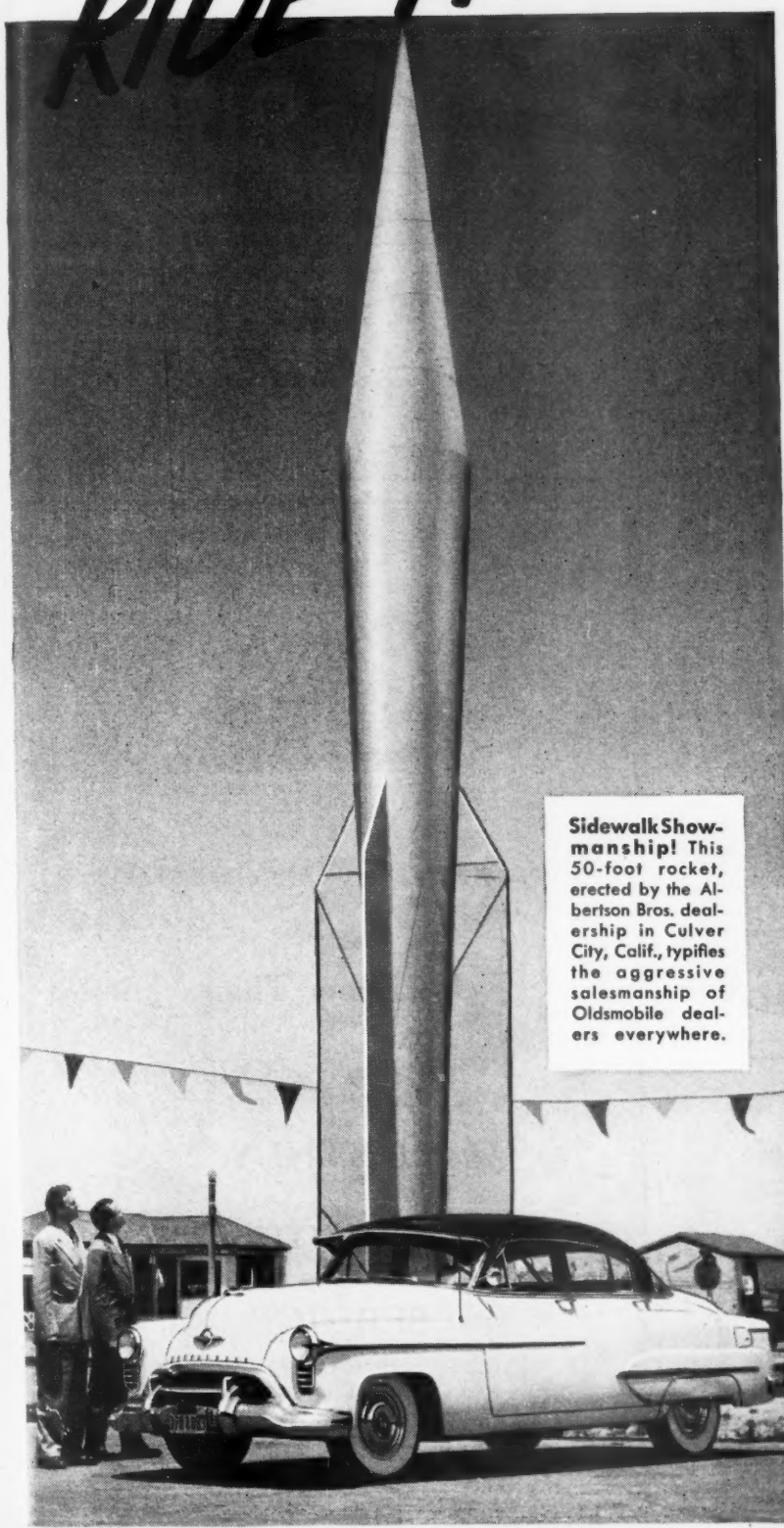
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Thousands of enterprising Oldsmobile dealers are ridin' high, wide and handsome—headed straight for the greatest selling year in their history! Already more new "Rocket" Engine Oldsmobiles have been produced and sold in 1950 than in any other single year—and *the public wants more!* They want to thrill to the trigger-quick response of Oldsmobile's famous high-compression "Rocket" Engine! They want to feel the smooth-going ease of Oldsmobile's exclusive new Hydra-Matic Drive! They're going for that "Rocket" ride! And Oldsmobile dealers everywhere are cashing in on this overwhelming public enthusiasm! That's the big reason why they're rocketing ahead to new sales records—with Oldsmobile!



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Any Shape with

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Clamp



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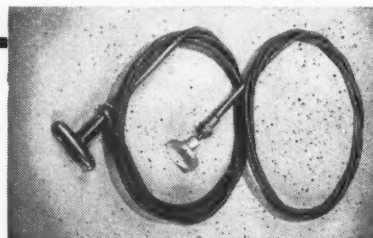


Do a
COMPLETE JOB
with

make more
money, too!



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for practically all makes of cars. Quality products with exclusive engineering features and trouble-free service. Easy to install. Easy to sell. Contact your local jobber or write for full information.

Also Mfgs. of Revolutionary Aldo Conversion Kits

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Quickly and Easily

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RETAILS
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Dealers Profit
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This winter—give your customers the best in lock maintenance. Use Lock-Ease! Sell it three ways—as a special service...as part of the regular lube job...in 4-oz. cans for car and home use. Easy to apply. Penetrates quickly, helps seal out moisture, gives maximum protection against freezing. Order from your jobber—now.



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4-oz. Can delivers drop or pressure stream. List Price

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Look for it in the familiar blue package wound on metal spools. Comes in all sizes and compositions... analysis on the package. Listed by Underwriters' Laboratories, Inc.

Federated Metals
Division

AMERICAN SMELTING AND REFINING COMPANY
WHITING, INDIANA (CHICAGO)



AMKO

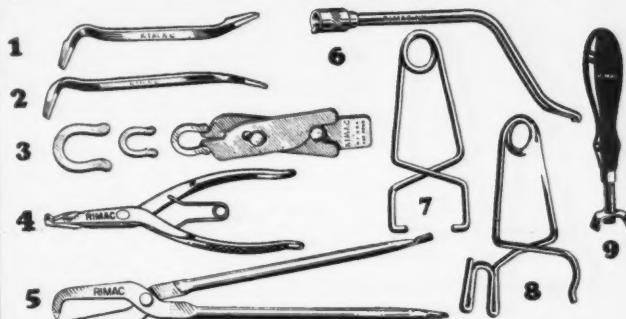
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AUTOMOTIVE
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and price list.

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HERE'S A COMPLETE LINE OF
BRAKE SERVICE TOOLS FROM
RIMAC



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Write for our complete catalog or see your jobber.

RINCK-McILWAINE, INC.
16 Hudson Street, New York, N. Y.

Index to Advertisers

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AC Spark Plug Div.	20-21
Accurate Parts Mfg. Co.	158
Air Reduction Sales Co.	90
Airtex Automotive Div.	74
Aluminum Co. of America	71
American Brakeblok Div., Amer. Brake Shoe Co.	133
American Chain & Cable Co.	4
American Grease Stick Co.	159
American Hammered Piston Rings	83
Anthony Company	142
Armstrong-Victor	13
Aro Equipment Corp.	2
Arvin Industries, Inc.	154
Auto Lamp Manufacturing Co.	87
Automatic Steel Products, Inc.	—
Automotive Mfg. Co., Inc.	159

Bear Mfg. Co.	154
Bendix Products Div.	156
Blackhawk Mfg. Co.	15
Bonney Forge & Tool Works.	123
Borg-Warner Corp.	101
Bowes Seal Fast Corp.	107
Breeze Corporations, Inc.	158
Brunner Manufacturing Co.	118
Buckingham Mfg. Co., Inc.	156
Buick Motor Div.	147
Burd Piston Ring Co.	116
Burndy Engineering Co.	154

Campbell Chain Co.	18
Champ-Items, Inc.	142
Chevrolet Motor Div.	137
Chicago Pneumatic Tool Co.	111
Choldun Mfg. Corp.	152
Chrysler Corp.	10-29
Classified Advertisements	158
Cole-Hersee Co.	152
Commercial Credit Corp.	69
Commercial Solvents Corp.	141
Commercial Trades Institute.	152
Crescent Company, Inc., The ..	24

Delco Prod. Div. General Mo- tors Corp.	125
Delco-Remy Div. General Mo- tors Corp.	6
De Soto Div. Chrysler Corp.	151
Detroit Aluminum & Brass Corporation	148
De Vilbiss Company	152
Drew & Co., Inc., E. F.	152
Durkee-Atwood Company	26-27
Duro Metal Products Co.	152

Echlin Mfg. Co.	76
Eis Automotive Corp.	124
Electric Auto-Lite Co.	8-9-61-80-81
Electric Heat Control Co.	120
Electric Storage Battery Co.	121
Ethyl Corporation	11
Executone, Inc.	152

Federal-Mogul Service	93-114
Federated Metals Div.	159

Fitzgerald Mfg. Company	91
Ford Div. Ford Motor Co.	97
Fram Corp.	109
Frenchtown Porcelain Co.	156
Fulton Company	31

Garbisch-Edgington, Inc.	154
Gatke Corporation	128
General Electric Co.	-153
General Motors Corp.	155
Grey-Rock Div. Raybestos- Manhattan, Inc.	7
Grizzly Mfg. Co.	115
Guide Lamp Div.	12

Hastings Mfg. Co.	2nd Cover
Heller Brothers Co.	96
Holley Carburetor Co.	22
Hollingshead Corp., R. M.	19
Homestead Valve Mfg. Co.	86
Houdaille-Hershey Corp.	149
Hudson Motor Car Co.	135
Hyatt Bearings Div.	100

Johns-Manville *	139
Johnson Bronze Co.	72

K-D Manufacturing Co.	138
Kelsey-Hayes Wheel Co.	146
Kem Mfg. Co., Inc.	122
Ken Tool Mfg. Co.	154
Kent-Moore Organization, Inc.	117
Kester Solder Co.	88
Koppers Co., Inc., Piston Ring Div.	83

Libbey-Owens-Ford Glass Co.	144
Lincoln Electric Co., The.	82
Lion Oil Company	119
Lustrous Products Co.	158
Lynch Corporation (Par Com- pressor Div.)	78

McQuay-Norris Mfg. Co.	112-113
Marsh-Wall Products, Inc.	108
Monmouth Products Div.	154
Monroe Auto Equipment Co.	162
Moog Industries, Inc.	5

Moraine Products Div. General Motors Corp.	140
Motor Age	150
Motorola, Inc.	130
National System of Garage Ventilation	156
Nealon Associates, Frank A.	154
Neapco Products, Inc.	142
New Britain Machine Co.	103

Oldsmobile Division	157
Owens, Corning Fiberglas Corp.	134

Packard Electric Div., Gen- eral Motors Corp.	73
Parkwood Mfg. Co.	154
Pedrick Piston Ring Div.	14
Pennsylvania Refining Co.	110
Perfect Circle Corp.	59
Perfection Gear Co.	89
Permatex Co., Inc.	1
Pontiac Motor Div.	131
Prest-O-Lite Battery Co., Inc.	28

Radiator Specialty Co.	92
Ramsey Corporation	3rd Cover
Rinck-McIlwaine, Inc.	159
Rinshed-Mason Co.	129
Rust-Master Chemical Co.	95

Saturday Evening Post	98-99
Schrader's Son Div., A.	77
Sealed Power Corp.	32
Service Spring Co.	154
Skillsaw, Inc.	79
Snap-on Tools Corp.	85
Southern Friction Materials Co.	154
Standard Motor Products, Inc.	30
Storm-Vulcan, Inc.	84
Studebaker Corp.	57
Sun Oil Co.	136
Sunnen Products Co.	126-227
Superior Screw & Mfg. Co., Inc.	158

Thermoid Company ...	Back Cover
Timken Roller Bearing Co., The	25

United Motors Service	132-161
----------------------------	---------

Van Dorn Electric Tool Co.	75
Victor Manufacturing & Gas- ket Company	13

Wagner Electric Corp.	104-105
Wayne Pump Co., The	143
Weatherhead Co., The	145
Weller Electric Corp.	106
Wilkening Mfg. Co.	14
Willard Storage Battery Co.	16-17
Wiry Joe	24
Wix Accessories Corp.	23
Wohlert Corp.	94
Wood Co., Frank N.	102



In Notre Dame's defeat of Army, 1913, Dorais and Rockne became the first great passing combination in football.

WINNING COMBINATIONS

YOU and UNITED MOTORS LINES

Winning combinations in business don't just happen . . . they are the result of *careful planning* by *careful people* working with *quality products*. United Motors, for instance, furnishes products that are used as original equipment on the country's leading cars, trucks and buses; it supplies advertising and promotion material on these products, *plus* up-to-the-minute service and parts data on old-model as well as current-model vehicles. If you, as a dealer, wish to become part of a winning combination, talk it over with your United Motors distributor—or write directly to us.

UNITED MOTORS SERVICE

Division of General Motors Corporation
General Motors Building, Detroit 2, Michigan

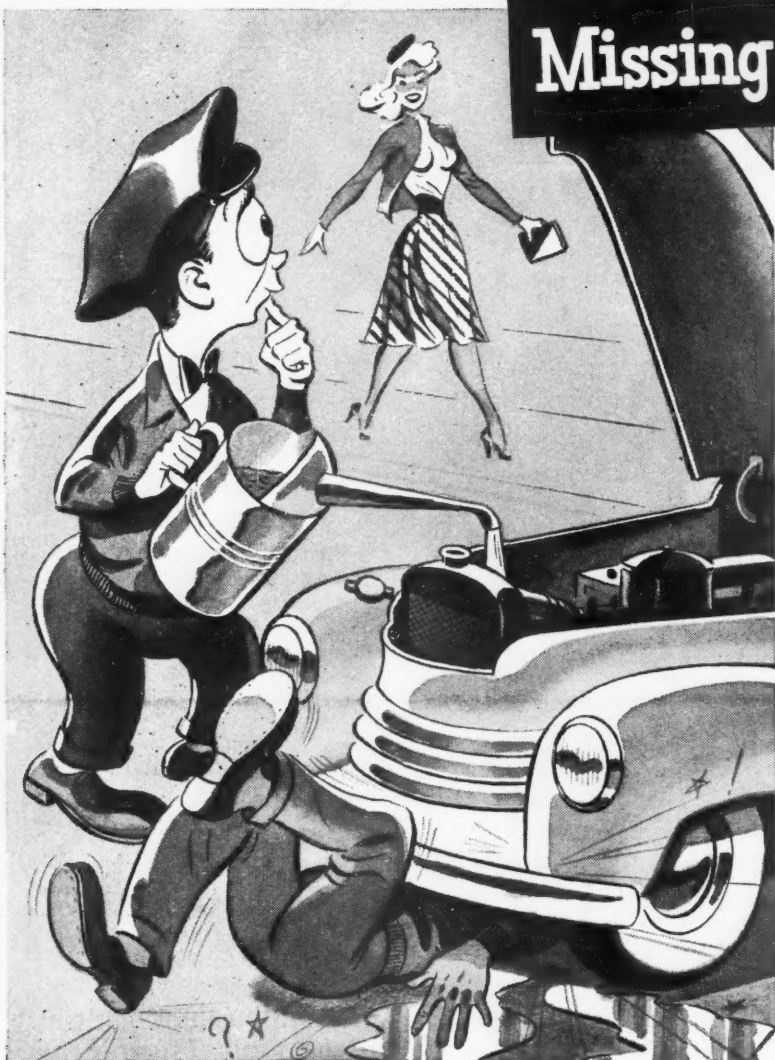
DELCO Batteries
AC Gauges, Speedometers
and Rebuilt Fuel Pumps
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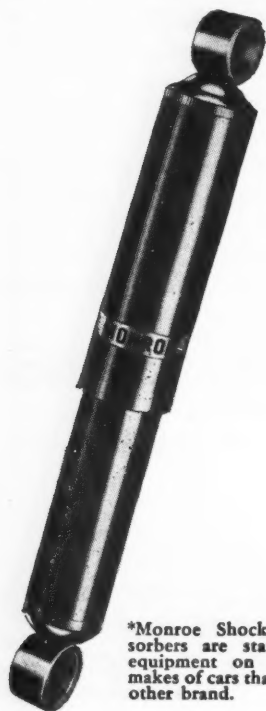


Missing something, Mac?



Mac is wasting only water; but plenty of dealers are letting money go down the drain by not selling Monroe replacement shock absorbers. They are missing thousands of sales to owners of cars that need new shocks, simply because they don't realize what a money-making opportunity they are overlooking.

Smart operators make sure they don't miss. They line up with Monroe because Monroe is the original equipment leader* and replacement favorite, too! Monroe shocks are *your* best bet for the kind of replacement business that means more volume, more profits. Ask your jobber or write direct about the Monroe franchise today.



*Monroe Shock Absorbers are standard equipment on more makes of cars than any other brand.

YOU'LL MAKE MORE MONEY SELLING MONROE SHOCKS!

Less than \$35⁰⁰ Gets You Started

Let this handy display rack stimulate your shock absorber sales. It reminds your customers to get their replacement shocks from you. Compact, colorful, it is easily set up on counters, in show windows, driveways or islands.

The rack holds 10 Monroe Shock Absorbers and 3 Monroe grommet sets. The standard assortment includes sizes to fit 85 % of all cars on the road. The whole kit costs less than \$35.00—*pays back better than \$20.00 profit every time contents are sold.*



MONROE AUTO EQUIPMENT CO.

Monroe, Mich. — World's Largest Maker of Ride Control Products

Sell the BIG PROFIT SERVICE this Easier Way...

RAMCO

The Motor of this Car has been

RE-POWERED for
New Car Performance

and

Guaranteed
FOR ONE YEAR OR **10,000 MILES**
AGAINST OIL PUMPING

This motor has been overhauled, RAMCO 10-Up piston rings, valves and pistons resized in accordance with the terms of the RAMCO Warranty on this car.

RAMCO
RE-POWERING
STATION

RE-POWERING Sells Customers on letting you DO THE JOB RIGHT! With Ramco RE-POWERING Plan you sell all four essentials to proper engine conditioning with *one* program that makes car owners say YES . . . that's what I want.

Try it! . . . Use the Ramco RE-POWERING materials to convince the car owner that the best buy is

the complete reconditioning job which includes all four . . . 10-Up Rings (Compression) . . . Carburetion, Ignition . . . Cooling. Explain THAT IMPORTANT LABOR COVERAGE in the Ramco 10,000 Mile Guarantee. It's a world beater for clinching ring sales! See your Ramco Jobber today. Ramsey Corporation, St. Louis, Missouri.

Year after Year, Better and Better, Yet, UNCHANGED IN BASIC DESIGN Since Originated by Ramco Many Years Ago . . .

RAMCO 10 up
ALL-PURPOSE PISTON RINGS

Unchanged except for the Better through continuous engineering perfection of detail. No obsolescence loss or risk of performance disappointment due to frequent design changes.

Ramco Rings and Re-Powering Sign are nationally advertised in



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POST
Collier's



The One and Only

Thermoid Custom-Built Brake Lining is the one and only brake lining carrying the famous Pittsburgh Testing Laboratories Seal... certifying that "the lining in the package is correct for the brakes with which the car specified is equipped." Thus, with Thermoid Custom-Built Brake Lining you eliminate all guess-work and give your customer "the safest thing on wheels." Ask your Thermoid distributor about CB Sets and Thermoid Precision Processing Equipment, which guarantees a top quality relining job every time.

Watch for "The Safest Thing on Wheels" Thermoid's instructive new talking movie. Your Jobber will inform you when this Film will appear in your locality.



Thermoid

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Hydraulic Brake Parts and Fluid • Car Mats • Clutch
Facings • Thermoid Precision Process Equipment

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